



CITY OF UPLAND
Public Works Department
460 North Euclid Avenue
Upland, CA 91786
(909) 931-4314

PUBLIC WORKS LAND DEVELOPMENT BOOKLET

General Information of
**Fees - Cost Estimates -
Improvement Plan Checklist
and
Construction General Notes**

PUBLIC WORKS MISSION STATEMENT

To Plan, construct, and maintain a safe and effective infrastructure which meets the present and future needs of the City.

Braden Yu, P.E.
Public Works Director

Alan French, P.E., P.L.S.
Principal Engineer

DATE: November 2, 2022

TO: Developers, Engineers, Architects, Land Surveyors and Contractors

FROM: Alan French, P.E., P.L.S.
Principal Engineer

RE: Public Works Land Development Guidelines

The *PW Land Development Booklet* is a document to help you process documents and improvement plans through the Public Works Department. Any work within road dedications, in existing or proposed roads, on City property or in City right-of-way requires Public Works review. This document covers the process to get those items and/or plans for that work reviewed and processed to the next step, typically, execution or construction. We want to get you through the process as fast as possible and in an efficient manner.

Most of your nontechnical questions such as the status of your project, who your plan checker is, bonds and agreement status, fees, etc., all such questions can be answered by our staff at (909) 931-4314.

If you have submitted a case and it is in for plan checking, please contact the assigned plan checker directly for updates or questions.

If there are issues or you are not getting a response, please contact Alan French at (909) 931-4235 or afrench@ci.upland.ca.us for Land Development issues.

Plan Check and Miscellaneous Fees

Plan Check fees are set by the council as Ordinance 1962. The ordinance is updated as needed to cover the city costs to provide the services. Below are the latest fees for the services listed by the Land Development section of Public Works shown as a base fee and per sheet basis unless otherwise indicated. Depending on the complexity of the plan or document, in addition to the minimum fee, hourly rates and additional costs are applicable. In the case of the Erosion Control, if the plans are included in the precise grading plan, then the grading plan check fee is used.

Map Checking Fee

Final Tract or Parcel Map..... \$3,627.00 first two sheets plus \$50.00 per lot

Public and Private Improvement Plan Check Fees

Street Plans..... \$3,608.00 first two sheets plus \$800.00 each additional sheet
 Sewer Plans \$3,608.00 first two sheets plus \$800.00 each additional sheet
 Water Plans..... \$3,608.00 first two sheets plus \$800.00 each additional sheet
 Storm Drain Plans \$3,608.00 first two sheets plus \$800.00 each additional sheet
 Other Improvement Plans \$3,608.00 first two sheets plus \$800.00 each additional sheet

Grading Plan Check Fee

Rough Grading Plans- Residential \$2,000.00 first two sheets plus \$300.00 each additional sheet
 Rough Grading Plans-Commercial/Industrial \$2,000.00 first two sheets plus \$300.00 each additional sheet
 Precise Grading Plans-Residential \$2,702.00 first two sheets plus \$300.00 each additional sheet
 Precise Grading Plans-Commercial/Industrial \$3,000.00 first two sheets plus \$300.00 each additional sheet

Erosion Control & Other Improvement Plan Check Fees

On-site Utility Plans \$2,000.00 first two sheets plus \$800.00 each additional sheet
 Demolition Plans \$2,000.00 first two sheets plus \$800.00 each additional sheet
 Horizontal Control Plans \$2,000.00 first two sheets plus \$800.00 each additional sheet
 Erosion Control Plans \$2,000.00 first two sheets plus \$800.00 each additional sheet
 Traffic Control Plans \$2,000.00 first two sheets plus \$800.00 each additional sheet

Landscape Plan Check Fee

Public Landscape Plans..... \$1,475.00 (minimum fee plus hourly rate)
 Private Landscape Plans \$1,475.00 (minimum fee plus hourly rate) plus \$25.00 per lot

As-Built Plans, Revisions, and Over 3rd Review

As-Built Plans..... \$1,000.00 (minimum fee plus hourly rate)
 Revisions..... \$792.00 (minimum fee plus hourly rate)
 Over 3rd Review Billable hourly rate for each reviewer

Reports, Agreements, and Covenants

Hydrology Reports	\$1,1080.00 (minimum fee plus hourly rate)
Soils Report.....	\$818.00 (minimum fee plus hourly rate)
CC&R's	\$794.00 (minimum fee plus hourly rate, plus additional costs)
Bond Agreements	\$852.00 (minimum fee plus hourly rate)
Bond Calculation Review	\$493.00 (minimum fee plus hourly rate)
Declaration of Covenant for Parkway Landscape	\$996.00 (minimum fee plus hourly rate)
Encroachment License Agreement.....	\$1,000.00 (minimum fee plus hourly rate)
Traffic Studies	\$1,339.00 (minimum fee plus hourly rate, plus additional costs)
Miscellaneous Agreements.....	\$852.00 (minimum fee plus hourly rate)
Reimbursement Agreements	\$825.00 (each)
Outside City Utility Service Agreement.....	\$1,493.00 (each, 15% additional outside agency and/or consultant costs)

Miscellaneous Plan Check Fees

Miscellaneous Technical Document Plan Check Fees

Lot Line Adjustment	\$1,363.00 first two sheets plus \$50.00 per lot and/or parcel
Lot Merger.....	\$1,363.00 first two sheets plus \$50.00 per lot and/or parcel
Certificate of Correction	\$800.00 (minimum fee plus hourly rate)
Irrevocable Offers of Dedication	\$800.00 (minimum fee plus hourly rate)
Dedications (Easement Deeds & Grant Deeds)	\$800.00 (minimum fee plus hourly rate)
Quit Claim Deeds	\$800.00 (minimum fee plus hourly rate)
Legal Descriptions	Pass through fee of actual costs + 10%
WQMP.....	\$1,341.00 (minimum fee plus hourly rate)
SWPPP	\$916.00 (minimum fee plus hourly rate)
Waste Management Plan.....	
Remodel < 1,000 sf.....	\$210.00 (minimum fee)
Remodel > 1,000 sf.....	\$307.00 (minimum fee)
New Construction 1,000-3,000 sf	\$307.00 (minimum fee)
New Construction > 3,000 sf.....	\$307.00 (minimum fee)
New Construction Commercial & Industrial	\$436.00 (per 1,000 sf)
Miscellaneous Reports, Studies & Technical Documents	\$1,000.00 (minimum fee plus hourly rate)

Research

Engineering Record Research Request	\$76 Deposit, plus actual cost based on time spent at \$60.00 per hour
Utility Research Request	\$140 Deposit, plus actual cost based on time spent at \$60.00 per hour

Hourly Rate for Engineering and Land Development Review

Plan Check.....	\$ Billable hourly rate for each Reviewer, consultant fees, pass through fees, attorney's fees, or other additional costs.
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Miscellaneous Plan Check Fees

Permits Fees

Construction Permit plan check not required	\$100.00 each plus hourly inspection rate: \$160.00/hour (the inspection deposit is determined by Public Works)
Construction Permit plan check required	\$128.00 each plus hourly inspection rate: \$160.00/hour (the inspection deposit is determined by Public Works)
Clear and Grub Permit	\$100.00 each plus hourly inspection rate: \$160.00/hour (the inspection deposit is determined by Public Works)
Temporary Lane Closure Permits	
Partial Closure	\$325 each Permit
Full Closure	\$104 each Permit (per advanced approval only)
Traffic Control	
Construction Truck Access Plan	No Fee

Incidental Fees

CD (to transfer research data)	\$60.00 each
Copies	\$0.25 per page (11x17 largest size available)

Additional Plan Checks

Plan check fees quoted above cover three (3) plan check reviews for the minimum fee. Additional fees are based on the billable hourly rate of each reviewer, time, and material for additional plan check reviews.

The plan check time required for a project depends on the workload of the plan checkers and the complexity of the project. An approximate plan check time will be given, if requested, at the time of submittal of the plans. We use consultant plan checkers as well as in-house staff to meet the workloads.

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I. IMPROVEMENT PLAN SUBMITTALS

A. PRE-DESIGN CONFERENCE PROCEDURE

1. Purpose

To provide the developer's project engineer with a forum to resolve questions about design policies, special design problems and details prior to the actual preparation or submittal of final plans for review and approval of projects within the City.

2. Request for Pre-Design Meeting

To schedule a pre-design meeting, please call the Land Development Section at (909) 931-4314. The meeting participants must include the developer, his project engineer and/or his staff member(s) and the Public Works personnel. This is a must for PW cases.

PW cases require a pre-design meeting and signoff by Plan Check staff. Reasons for PW cases include multi-phase projects or off-site improvements or non-conditioned projects.

3. Alternative Design Proposal

If the decisions from the pre-design meeting(s) are found to be unworkable, alternative designs may be presented at a subsequent meeting. The developer's project engineer may request additional meeting(s) until a satisfactory decision that is mutually agreeable is reached. Public Works may require a deposit to cover costs associated with the pre-design meeting(s).

It shall be the developer's project engineer's responsibility to provide a written summary of decisions reached at the pre-design meeting(s) with the first submittal.

The written summary should have the signature of the City representative and be submitted within 10 working days from the date of the meeting. The pre-design meeting shall be limited to one hour or as approved by the Public Works Department.

If for any reason, a full, complete package cannot be submitted at the first submittal, an "At-Risk" process needs to be discussed and agreed to prior to the first submittal at which time an "At-Risk" letter will be required with the first submittal package.

4. Appeals

If the developer's project engineer does not agree with the decisions made by the Public Works during the pre-design meetings, the engineer may request a meeting with the City Engineer.

5. Submittal

As stated earlier, the pre-design meeting is limited to one hour or as approved by the Public Works Department, so additional costs incurred for additional staff time, calls and e-mails will require a preliminary submittal with a deposit to cover these costs.

B. PLAN CHECK APPLICATION AND FIRST SUBMITTAL REQUIREMENTS

Date: _____ Project Number: _____

Project Address (when applicable): _____

Engineer: _____ Developer: _____

Address _____ Address: _____

Contact: _____ Contact: _____

Phone: _____ Phone: _____

Email: _____ Email: _____

1. Submit to Public Works electronically per "Electronic Submittal" section of the Land Development Booklet, once created include this application and completed table below along with the files of plans and related items included in the submittal. Items not relevant to the project submittal may be omitted (i.e., Final Map and related items, if no map is involved).
2. If unable to submit electronically, provide plans on 24" x 36" bond paper, stapled and folded to 8½ X 11 using the City's Standard Title Block. Ultimately, final plans shall be submitted for signature on Mylar (0.4 ml). The City will not accept original plans on Sepia, Sepia Mylar, Vellum, Xerox Mylar, or stick-on applications. Check the "**TOTAL SUBMITTED**" column for items submitted. When in doubt, include the item.
3. Plan Check submittals must be complete. The Planning Division Approval Letter **MUST** be included to complete your submittal. Partial and/or Incomplete packages will not be accepted for plan check. You will be notified of incomplete submittals.

Total Needed	Total Submitted	Submittal Items
2		Approval Letter / Approval Resolution/Conditions of Approval - Required for first plan check
2		Site Plan
2		Rough or Precise Grading Plans (including Erosion Control Plan)
2		Parcel/Tract Map
2		Preliminary Title Report, not over 30 days old (also required for legal descriptions)
2		Record documents referred to in the title report
2		Map Traverse Calculations and Closures
2		Approved Tentative Map
1		Pertinent reference materials (i.e., deeds, recorded maps, etc.)
2		CC& R's
		Public and Private Improvement Plans
2		Street
2		Water
2		Sewer
2		Storm Drain
2		Other
2		Related Reference Grading Plans
2		Referenced Water and Sewer Plans
2		Cross Section (when widening existing streets)
2		Reference Street Plans, minimum 300 feet off-site
2		Signing and Striping Plans

2		Traffic Signal Plans with special provisions
2		Hydrology/Hydraulic Study
2		Off-Site / On-Site Landscape Plans
2		Legal Descriptions for Easement Deeds, Dedications, etc. with Exhibits and Title Report
2		Traffic Study
2		Soils Report
2		WQMP and SWPPP and copy of NOI (where applicable)
2		Other items not listed (add additional sheet if necessary) Lot Merger

Phased Development Submittals:

In cases where a master tentative tract map is divided into sub-tracts or phases, each sub-tract or phase shall be submitted as its own, separate set of complete plans. It should be complete on its own merit. Combining of improvement plans for sub-tracts or phases is not allowed, except for grading plans.

Subsequent Plan Checks:

For hard copy submittals, each subsequent plan check, the last set of redlined plans and the requested number of revised sets required by the plan checker shall be submitted. If these items are missing, your submittal will be returned, un-checked, until all required items are submitted.

For electronic re-submittals, this is not required as all previous submittals are in the plan check module of ENERGOV.

Plan Content:

Enclosed in Chapter IV are improvement plan checklists that are to be used as a guide in the preparation of your plans for both public and private improvements (street, sewer, water, storm drain, etc.). Should you have any questions, please feel free to contact Public Works.

C. ELECTRONIC SUBMITTALS

- Electronic submittals are accepted through the on-line portal accessed through the city website, www.uplandca.gov/css-portal. First an account needs to be created, then contact the Public Works Plan Check staff to start a plan check case, then you will be notified that you can upload the plans and documents into the case for review.
- All plans and reference material will be required as well as a completed application. Once submitted, we will create an invoice for payment of the submittal and notify the applicant about the invoice. Once paid, the plans will be assigned for checking. Electronic payments can be made for the invoice, remotely online at the convenience of the applicant.
- See the city website for the Online Plan Submittal Guidelines.
- If there is no internet service, CDs or a Flash Drive are also an accepted electronic submittal option and can be submitted for up loading at the City Hall.
- Once the Plan Check is completed, the applicant and engineer will be notified of the completion and the red-lines and plan check comments will be provided in the plan check module of ENERGOV for access. A PDF of the plan check comments can be e-mailed if requested.
- When all comments have been addressed, the Plan Checker will request the final signed mylar for processing and City's permanent record. (This step to be modified or eliminated as the electronic plan check process evolves).

D. IMPROVEMENT PLANS – PAPER RESUBMITTAL

- If the corrected plans cannot be submitted electronically, have a local print shop scan the plans so they can be submitted. The corrected street, signal and all other plans previously submitted need to be electronic to upload in ENERGOV. If signal and/or striping plans are required, submit those as well with the street improvement plans. Always include the red lined plans that were previously provided as well as an updated Construction Cost Worksheet. Submit directly to your case in the plan check module of ENERGOV program online.
- Upon the second plan check review, the plan checker shall call a meeting with the engineer and the owner/developer to work out any issues prior to continuing the plan check process. Also, annexation for landscaping, signals, etc., needs to be applied for at this time prior to the continuation of the plan check.
- To check on the status of the street improvement plans call 909-931-4314.
- Resubmittals – We require electronic submittals, if an exception is made to allow a hardcopy submittal, the written exception must be forwarded to the assigned plan checker and the Principal Engineer.

NOTE: Prior to mylar approvals, the plan checker shall check to ensure that all the fees are paid for the case. Any outstanding fees or additional money due for plan checking or inspection will need to be paid prior to plan approval. Inspection fees will be due for maps prior to recordation of the map per City Ordinance.

E. SUBMISSION OF PLANS FOR FINAL REVIEW AND APPROVAL

When there are no more comments and the plan check process is complete, the plan checker will ask the design engineer to submit the following hardcopies:

1. The last set of the plan checker's redlined plans, if not included already in ENERGOV.
2. Original Mylar's of all plans wet-signed and stamped by the Civil Engineer,
3. One bond copy of all the originals, and
4. Additional plan check fees (if required) by fee calculation.
5. Fully executed subdivision agreement with performance, engineer's cost estimate and payment bonds (If applicable).
6. Copy of Final Map (If applicable).

Note:

Original mylars will be routed (by Public Works) to several City divisions for signatures. **Please allow at least two weeks to obtain the required approval signatures.** Permits will be issued or map returned, when all approvals have been obtained, the developer and/or engineer has to supply two (2) copies of all approved plans to the City, the contractor has met all permit requirements, and the inspection deposit and permit fee has been received.

F. REVISING APPROVED STREET PLANS AND CHECKING OUT ORIGINAL PLANS

Revisions:

Revisions may be made to City-approved improvement plans, as follows:

Proposed revisions shall be drawn in red on a bond copy of the original plan. The redlined print and minimum plan check fee per latest fee schedule are submitted to Land Development Section of Public Works for review. The revision plan check is also subject to additional fees for the billable hourly of each reviewer, consultant costs and other applicable fees.

Upon approval of the revision(s), the engineer may check out the original plans.

After the original is revised, the engineer shall submit the revised original, the redline print and a bond copy of the revised original to Public Works for final approval.

If the engineer revising the plan is not the original design engineer, he/she shall draw a new signature block on the plan and wet-sign and seal the plan for the revisions that have been made. In all cases, the revision shall be noted in the revision block of the plans and the location of the revision shall be clearly shown on the plan.

1. If project is not in construction yet but there is an issue with the plans or in the field, a plan revision shall be done. (Not an As-Built)
 - a. If a revision must be made to an approved plan which has been signed by the City, the proposed revision should be made in red lines on a blueprint of the originally signed plan. The red-lined copy of the plans should then be submitted to the Public Works Department. If the submittal is not associated with an active case, the red-lined plans should be submitted with an application and deposit for review and approval. Once the red-lined copy is approved, the engineer may check out the original plans by bringing in a signed reproducible plan or a print of an originally signed full size plan along with the approved redlines. Public Works can then hold them while the originals are checked out to the engineer to make the revision. As an option, Public Works can also make another set of reproducible plans, at the engineer's expense, to hold. Once the engineer revises the originals per the approved, red-lined plans, the engineer should resubmit both the originals and the red-lined plans to Public Works for signature. Once the revised originals are signed, the applicant can pick up the revised originals to get blueprints made for the Permit, returning the prints and originals to Public Works.
 - b. Revisions to signed plans must be made by the original design engineer or firm. Should revisions be requested by another engineer who is not the design engineer or firm, the revising engineer has two options to follow:
 1. The revising engineer should contact the design engineer or firm to inform of the proposed revision and to get permission in writing to make the revisions and to check out the originals. Upon meeting this requirement, the revising engineer should then follow the above referenced procedure (see 1.a). The revising engineer is required to have a signature block signed, and wet stamp for that revision on each revised sheet.

2. The revising engineer may process new plans showing all the existing drawings in dashed lines and labeling them as existing and showing the revisions in solid lines. The revising engineer must then sign, seal and submit the plans to the Public Works Department for review and signature.
 - c. Following the second option does not require the revising engineer to contact and get permission from the design engineer or firm.
 - d. If the revisions to the sheet will be cluttered and unreadable or the existing plan is very old, it may be more desirable to replace the sheet and void out the old one, which will be considered at the request by the revising engineer. All voided sheets are to be kept in the set for history. If no plans have gone to construction or have been distributed to other agencies, the original sheets may be discarded at the discretion of the plan checker.
2. If the project is under construction and a revision must be made for any reason, then the developer's construction engineer must redline the revision on the approved plan and submit it to the City construction engineer or inspector for their approval. Once approved by them, the plans will be given to Public Works and the plan checker will contact the developer's construction engineer to have them check out the original mylars to revise. Once revised, the plan checker will verify the revisions on the mylars and recommend for signature. Once signed, plan checker will notify engineer to pick up mylars for printing. The new copies will be sent to Public Works to follow up with their inspections.
3. Plan requirements for revisions to City mylars:
 - A. Paper print redlines shall be made from the approved, signed set. Half size prints are acceptable if the changes are readable. If the revision is not associated with an active case, the red-lined plans should be submitted with an application and deposit for review and approval. See Section I.-B.
 - B. Cloud the revisions that are to be made.
 - C. Show notation and delta revision number in the revision block. Do not use more than one line as the description should be brief. If additional text is needed, show a clouded note elsewhere on the sheet.
 - D. Do not erase, nor obliterate, any record data (single line through old data) or "x" outline work to be changed.
 - E. Include sheet 1 (title sheet) as it carries a "catalog" of all revisions to a plan set. (Do not use "local" delta numbering on a sheet.)

Example: Delta 1 on sheet 5 is the same Delta 1 on sheet 26 and shown on Title Sheet as Delta 1. Delta 2 might only be a change to sheet 17 and should be shown as Delta 2 on the title sheet. Deltas are time dependent and occur on specific dates.
 - F. City plan checker will write "OK TO REVISE", sign and date on reviewed, red-lined plans at which time the plans can be checked out. A replacement set of plans is required as a placeholder while the originals are checked out. Once approved, originals shall go back to Public Works for filing and the replacement set returned or discarded.

G. AS-BUILT PLANS

As-built plans shall be submitted and approved prior to filing a Notice of Completion for any project. As-built revisions shall be made on the original, signed plans per the procedures above for revisions.

Upon completion of construction for any project, our construction inspection/engineer will require the developer/engineer to submit "As- Built" plans for them. The street, sewer, water, grading and striping plans are As-Built through Public Works, Flood Control does their facilities. Signal plans require changes to be approved before construction (See Plan Revision Process.), landscape will be As-Built by whomever will be maintaining property and the streetlight plan is not for construction, so no As-Built is required.

1. On 2 prints of the approved plans, the engineer must redline any construction deviation from the approved plans and must be signed and sealed by the developer's construction engineer and labeled "As-Built." Each sheet needs to be stamped and signed even if there was no deviation, a blueprint copy still must be labeled "As-Built" and signed by the developer's construction engineer.

If a permit project does not have a change to the plan and a Notice of Completion is issued, Public Works will process the As-Built internally. These plans will be given to the construction inspector. They will verify the "As-Built" plans and write on them "OK TO PROCESS", then send them to Public Works for processing. The plan checker will contact the developer's construction engineer who signed these plans and ask him/her to revise the City original mylars per the red-lined "As- Built" plans. If the engineer doing the As-Built is not the original engineer or company, a notification is sent to the original engineer stating an As-Built is being performed for the improvements. The As-built engineer will need to add his/her block to the plans and note that they are signing for As-Built only. Print only the changes to be noted on the plans. The words "As-Built" are not to be put in every revision block. Once the original mylars are revised they will be stamped "As- Built" and signed by the plan check engineer and sent to Survey to be scanned and re-filed. The inspection will be notified by the plan checker processing the plans. If right-of-way is required, the dedication information shall be filled in if not already on the plans. If the right-of-way is not recorded, the Notice of Completion and/or final occupancy will be withheld until recorded.

No Revision Required

1. Addition or relocation of a landscape pedestal
2. Relocating streetlight less than 20'
3. Adjusting residential driveways if not stationed on plan
4. Utility retaining wall around vaults in right-of-way \pm 2' height

H. CONDOMINIUM PROJECTS

Typically, a condominium project is a one lot Tract Map which includes air space plans depicting limits for sale. These will have frontage improvements along the project on the public street as conditioned. The interior street may or may not have conditions. If they are not conditioned by Public Works, no plans will be reviewed or required by Public Works. If the interior streets are conditioned by Public Works, street plans will be required and reviewed by Public Works. City standards shall apply as well as the section and alignments approved on the tentative map.

The plan checker shall review the CC&R document to ensure maintenance of roads, landscape, WQMP, drainage facilities as required by the conditions of approval.

I. PROCEDURE FOR PROCESSING WATER AND SEWER PLANS

All developers and engineers must understand that the Public Works Department checks and approves all improvement plans for utility lines and appurtenances in the public right-of-way. If there is uncertainty on a project, contact the Public Works Department, at (909) 931-4314 for information.

Please see Water Plan Checklist and Sewer Plan Checklist for specific plan items the City requires for those plans. We regulate the area within the right-of-way to ensure all utilities have room for their facilities as per City Utility Location Standard No. 0000 dated 6-30-2011. Any deviation must be pre-approved. We also review size and location of surface features and depth below roadway. Design and location of these utilities **MUST** be per **OUR** standards, **NOT** any utility company standard.

We review the quantities on the plans and the Construction Cost Worksheet for correctness and consistency with the plans. We do require and hold the bonds for these improvements.

After plan checking is complete, the design engineer submits original mylars, signed by the engineer, and the Fire Department, for signature. (See Final Submittal checklist). A set of prints will be transmitted to the Construction Inspection Office after signature. It will be the responsibility of the design engineer to pick up and return the original mylars with electronic files and hard copies.

If there are changes in the field, all construction changes will be shown on the plans by the design engineer and will need to be approved by the City prior to construction. Also, changes affecting these facilities will require a submittal. See "Revising Approved Street Plans" for procedures. A replacement mylar is required for our records and needs to be provided to the Plan Check Section after City approval.

If an early signature (prior to signature with the street plans) of the water and sewer plans is allowed by Public Works, the total inspection fee including street portion, will be required at the time of signature.

J. ENCROACHMENT PERMITS

Our road system is divided into three categories:

1. City Maintained Roads
 - A. An encroachment permit **is required** for any type activity or encroachment within a City maintained right-of-way.
 - B. An encroachment permit **is required** for any tie-in to City maintained right-of-way. Dedicated Accepted roads (dedicated and accepted for public use, but not accepted for maintenance).
2. Private Roads (Not City Maintained)
 - A. An encroachment permit is required on Private Roads for the installation of public utilities and/or improvements, including laterals and service connections that are part of conditions of approval for a development project.
 - B. An encroachment permit is not required on private roads that have no conditions for improvements unless city acceptance for maintenance is desired by the developer. If more than 50 CY of dirt are moved, a grading permit is required as directed by Ordinance.
3. Other Roads (Maintained by other agencies, established by a reservation, easement between owners, but no dedications to the public)
 - A. An encroachment permit **is not required** for other roads, but if more than 50 CY are moved, a grading permit is required for none conditioned work.

Work in the right of way requiring inspection and permit only (over the counter.):

1. Replacing an existing residential driveway approach
2. Replacing water or sewer tap for residential use
3. City (capital improvement) projects, or other than developer projects (i.e.: a 24" trunk line)
4. Dry utilities – power, television, natural gas
 - III. Manhole or overhead wire access on local roads
 - IV. Vegetation Control for overhead power on local roads

Work in the existing or future right of way requiring plan check, permit and inspection:

1. Any conditioned project (TR, PM, PP, CUP, PUP)
2. Volunteer work as part of a conditioned project (MI)

3. Any change in drainage including under sidewalk drain, catch basin connection or storm drain installation
4. Dry Utilities - Any trenching, boring, open cuts or placing a new or replacement facilities requiring a lane or road closure. (Lane closures permits are not required on streets with 25 MPH limits or if the traffic is not impeded)
5. Change in type of streetlight (lumen/watt), change in location of streetlight more than 20', change in quantity of streetlight
6. Change to elevations/width/length/surface of road, curb & gutter, sidewalk, or other facility in road right of way
7. Any change to a traffic signal
8. Any change to signing/stripping
9. Any plan change required for a conditioned project. This will require full submittal package including approved COA, planning exhibit, grading plan, application, and plan check deposit.

An encroachment permit **is required** for any road that is part of a conditioned improvement and will be included into the maintained system when constructed, typically a permit will not be issued on non-city maintained (private) roads. Plans will be required to be checked by Public Works including a plan check deposit, permit fee and inspection deposit will also be collected by Public Works. When a permit is issued, inspection will be provided. If a permit is not required for a development project it may still require inspection to verify field conditions and activities.

K. CITY PLAN CHECKER'S REVIEW

1. Make sure plan check fee has been paid or the account has money to cover the immediate plan check.
2. Get the project file from the PW Cabinet and check the "Development Services" sub-directory for the project sub-directory.
3. Review all pertinent documents in paper and electronic file, including any previous discussions, commitments or agreements, and other documents.
4. Check with CIP to see if there are any roads scheduled for improvements and if so, coordinate with the Design group.
5. Check the Disposition Developer Agreement to see if there are any special rates or DIF exceptions.
6. Read and get familiar with all the approved conditions of the project including those conditions of other departments or agencies.

P.S. Make sure that you are reading and using the final conditions of approval.

7. Get the approved tentative map. Study it and get familiar with it and with all its design of geometry, slopes, limits of grading, etc. Check for off-site access roads and improvements. Review annexation conditions, look up project on district map and let owner know where to start the process for L&LMD, CFD or other annexations.
8. Study the proposed grading plan and lay it on and/or compare it with the approved tentative map, making sure that there is no major deviation in geometry, slopes, limits of grading, lot lines, etc. If any deviation is noticed, bring it immediately to your supervisor's attention for his evaluation and direction, and at which time he might decide to tell the engineer and/or the developer to go back to the Planning Department for their evaluation and written recommendation.
9. Proceed with your first plan check. If the design is incomplete, bring it back to your supervisor's attention at which time it might be decided to write "INCOMPLETE" on it and send it back to the engineer without any further plan check.

For all permit cases: SP, CUP, PUP, and MI, ask if it is in anyway related to any Tract Map or Parcel Map. If it is, we need to know and add both numbers, i.e., Use Case number and Map number to the plans. Index map needs to follow requirements per the check list, general notes. Plan check needs to review COA's and Tentative Map. Within project limits, frontage street work is required to centerline.

If it is complete, do a complete and thorough first plan check, including checking the construction cost estimate. When all is done, send all to engineer and write that he should send back to you all your corrections and copies you used for your first plan check. Be sure to check the GIS for CIP City projects and if there is one, coordinate with that project manager.

10. In performing plan check, you must ensure that all conditions are met in one way or another or the intent satisfied especially the Public Works Department conditions of approval. No exception. Also review for safety, facility constructability and maintainability.
11. Should a road or section of road or other required improvements found not to be practical for construction at this time, confer with your supervisor and if a decision is made to defer construction, then a cost estimate shall be prepared for the work, reviewed, and approved and cash in lieu of construction shall be paid to the City and an agreement shall be executed to document the understanding. See Section IV-O for the Cash-In-Lieu procedures.
12. If there is existing AC within the project limits and the applicant is not removing it, a materials report and existing cross sections are required. The number of samples shall be sufficient to accurately represent the existing pavement. If the AC is in good condition and the crossfall acceptable it can remain.
13. If offsite grading is required, the notarized letter of permission must accompany the improvement mylars for signature. If offsite right-of-way or drainage easements are required, they must be signed by all owners and be recorded prior to signature of the street mylars and show the recording data on the mylars.
14. For PP, CU, PU, and MI projects; you, the plan checker, must calculate the structural section from the worksheet, see appendix. The developer may be required to provide a pavement and structural analysis of an existing road for cut and match work within the project boundary.
15. Any landscaping proposed within City road rights-of-way must be submitted on City standard format sheets (24" x 36") with a standard title block and submitted together with the street improvement plans for all development proposals. See the Comprehensive Landscape Guidelines & Standards for plan requirements at www.ci.upland.ca.us.org/land_dev_landscaping_guidelines.html.
16. In second check, if you still find major problems and/or issues, call the engineer and the owner and have them come to meet with you and go over the issues to come to a resolution to a degree that you can check the plans or reject them until the first plan check comments are fixed, so when plans come for third check, they are coming in for or near signature. Final accounting must be reviewed for final check and ensure the plan check account is in the positive, and inspection deposit plus balance due must be paid now, prior to signing plans. Also, fees and securities report must be calculated if not done previously, and processed for bonding and agreements, if applicable. Also see Improvement Plan submittals section "C".

Remember PP, CU, PU, MI, and voluntary cases with any road improvements valued over \$50,000.00 or on a general plan road with lane closures will require bonding or as approved by the Public Works Department.

17. After plans are signed, purge the project paper file of items that are dealt with during the plan check process, and not require to be kept per records retention policy.

A copy of the geology and/or soils report, as well as a complete copy of the conditions of approval and any other special instructions or notes of importance must be sent to the inspector.

18. For parcel maps that require a minimum of road improvements, you need to ask if there are any utilities being constructed with the map.
19. For hardcopy submittals, we only need to keep the “last clean set” of drawings. On the first review, it is a clean set. Thereafter, it would be red-lines that were previously addressed. All plans need to stay with the plan checker or scanned into the project sub-directory until plan approval. All paperwork, 11”x17”, maximum should be kept in the paper file. (This only applies to plan checking paper submittals, see Electronic Plan Checking for those submittals.
20. Every tract or parcel map conditioned for improvements needs to be bonded or the improvements built per Ordinance. An “MI” case used for a map or a series of maps will need to be bonded. Permit cases having construction costs over \$50,000.00 or fronting a general plan road and affecting traffic flow needs to be bonded. Smaller permit jobs may be bonded at the department’s discretion, see Section III for bonding.
21. Private streets required by conditions on a project are to be plan checked and inspected by Public Works. See Section III-F. For maps with HOAs plan checker shall review the CC&Rs to insure the HOA is responsible for maintaining the conditioned improvement, i.e., streets, storm drains, BMP facilities, etc. This shall be done prior to map clearance.
22. If the engineer cannot comply with City/County standards, a fact sheet (Design Exception) shall be submitted, reviewed, signed, and filed for the project. The plan checker shall provide an example to the engineer and recommend the exception to the plan check supervisor.
23. Storm drain plans are checked if the project is conditioned to submit plans. Public Works shall review and approve the drainage study, WQMP, and storm drain plans.

L. AT RISK PLAN CHECKING

If for any reason the first submittal is incomplete it will be rejected. If there are special issues and they have been discussed at the pre-design conference or subsequent meeting, a letter of agreement needs to be included with the submittal. If the items missing or items submitted are deficient, the owner may request the plan check to be done “At Risk” by providing a notarized letter. (See appendix for example) The At-Risk Letter states that the owner accepts the risk and additional time and cost for processing incomplete submittals or un-finished designs and calculations should they be unacceptable at the time of approval.



**CITY OF UPLAND
PUBLIC WORKS DEPARTMENT
LAND DEVELOPMENT &
TRANSPORTATION DIVISION**

**COST ESTIMATE SUMMARY SHEET
Public Improvements**

BOND AMOUNT CALCULATION

Developer: _____
Project: _____
Location: _____

Item Description		Estimated Cost
1 .	Street Improvements	\$ -
2 .	Sewer Improvements	\$ -
3 .	Water Improvements	\$ -
4 .	Drainage Improvements	\$ -
5 .	Traffic Improvements	\$ -
6 .	Miscellaneous	\$ -
	Grand Total	\$ -
	20% Contingency	\$ -
	Bond Amount	\$ -
	Faithful Performance (100%)	\$ -
	Labor and Materials (50%)	\$ -
	Final Monuments (Cash Deposit required for monuments)	\$ -

Estimated By: _____
RCE#: _____
Date: _____

Bond amounts will be calculated by the Developer's Engineer and reviewed by the Public Works Department. Inspection fee deposits shall be paid prior to issuance of permit.



ESTIMATE OF COST FOR STREET IMPROVEMENTS

Developer: _____

Project: _____

Location: _____

Street Items	Quantity	Unit	Price	Amount
Roadway Excavation				\$ -
1. Projects with Grading Plan area X 0.50' (hinge point to hinge point) (_____ SF)		CY	\$25.00	\$ -
2. Projects without Grading Plan road area and side slopes to daylight. Cut (C) = Fill (f) =				\$ -
(a) Excavate & Fill		CY (c or f)	\$8.00	\$ -
(b) Excavate & Export		CY (c -f)	\$3.00	\$ -
PCC Curb and Gutter 6"		LF	\$66.00	\$ -
PCC Curb and Gutter 8"		LF	\$70.00	\$ -
Rock Curb and Gutter (6-sack mix for curb)		LF	\$110.00	\$ -
PCC Sidewalk		SF	\$10.00	\$ -
PCC Cross Gutter/Spandrel		SF	\$16.00	\$ -
PCC Curb Only 6"		LF	\$53.00	\$ -
PCC Curb Only 8"		LF	\$55.00	\$ -
Rolled Curb		LF	\$70.00	\$ -
PCC Pavement		SF	\$16.00	\$ -
Ribbon/Alley Gutter		LF	\$16.00	\$ -
Wheelchair Ramp (ADA Compliant)		EA	\$4,000.00	\$ -
Drive or Alley Approach		SF	\$12.00	\$ -
Asphalt Concrete (144 lbs./ft ³)		TON	\$95.00	\$ -
AC Patch-Trench (Match Existing)		SF	\$11.00	\$ -
Grind & AC Overlay @ 0.50 inch		SF	\$4.00	\$ -
Aggregate Base CL II		CY	\$55.00	\$ -
AC Berm		LF	\$20.00	\$ -
Streetlights Underground + Trench (Standard Marbelite)		EA	\$12,000.00	\$ -
Streetlights Underground + Trench (Decorative)		EA	\$14,000.00	\$ -
Install Barricades		LF	\$110.00	\$ -
Remove Barricades		LF	\$10.00	\$ -
Remove AC Pavement		SF	\$3.00	\$ -
Remove PCC Curb		LF	\$10.00	\$ -
Adjust Sewer Manhole to grade		EA	\$900.00	\$ -
Adjust Water Valve to grade		EA	\$300.00	\$ -
Sawcut		LF	\$2.00	\$ -
Decorative Concrete		SF	\$35.00	\$ -
Underwalk Drain		EA	\$3,800.00	\$ -
Parkway Trees		EA	\$350.00	\$ -
Parkway Landscape and Irrigation		SF	\$4.50	\$ -
Install Chain Link Fence		LF	\$50.00	\$ -
Irrigation Backflow Prevention Assembly (w/ enclosure)		EA	\$30,000.00	\$ -
Total for Street Improvements				\$ -

By: _____

Street Drawing Number(s): _____

Developer: _____

Project:

Location: _____

By: _____

Sewer Drawing Number(s): _____

ESTIMATE OF COST FOR WATER IMPROVEMENTS

Developer:

Project:

Location:

Water Items	Quantity	Unit	Price	Amount
6-inch Water Main (CML&C)		LF	\$ 120.00	
6-inch Resilient Wedge Gate Valve		EA	\$ 2,300.00	\$ -
8-inch Water Main (CML&C)		LF	\$ 125.00	\$ -
8-inch Resilient Wedge Gate Valve		EA	\$ 2,500.00	\$ -
6-inch Fire Hydrant Assembly		EA	\$ 11,000.00	\$ -
12-inch Resilient Wedge Gate Valve		EA	\$ 6,000.00	\$ -
Upgrade 4-inch Fire Hydrant Assembly to 6-inch		EA	\$ 11,000.00	\$ -
Relocate 6-inch Fire Hydrant Assembly		EA	\$ 11,000.00	\$ -
2-inch Water Service		EA	\$ 4,000.00	\$ -
1 1/2-inch Water Service		EA	\$ 3,500.00	\$ -
1-inch Water Service		EA	\$ 2,500.00	\$ -
2-inch Air Vacuum Release Valve		EA	\$ 7,000.00	\$ -
Blind Flange		EA	\$ 2,000.00	\$ -
Relocate Existing Water meter		EA	\$ 1,000.00	\$ -
6-inch Fire Service		LF	\$ 120.00	\$ -
Backflow Device		EA	\$ 3,500.00	\$ -
8-inch Fire Service with Vault and Valve		EA	\$ 12,000.00	\$ -
6-inch Fire Service with Vault and Valve		EA	\$ 8,000.00	\$ -
4-inch Fire Service with Vault and Valve		EA	\$ 6,500.00	\$ -
4-inch Modified Blow-Off Assembly		EA	\$ 6,500.00	\$ -
Blow Off Assembly		EA	\$ 5,000.00	\$ -
Recycled Water Line, Irrigation		LF		\$ -
Total for Water Improvements				\$ -

By:

Water Drawing Number(s):

ESTIMATE OF COST FOR STORM DRAIN IMPROVEMENTS

Developer:

Project:

Location:

Storm Drain Items	Quantity	Unit	Price	Amount
18-inch RCP		LF	\$ 215.00	
24-inch RCP		LF	\$ 225.00	\$ -
30-inch RCP		LF	\$ 240.00	\$ -
36-inch RCP		LF	\$ 270.00	\$ -
42-inch RCP		LF	\$ 300.00	\$ -
48-inch RCP		LF	\$ 450.00	\$ -
54-inch RCP		LF	\$ 480.00	\$ -
60-inch RCP		LF	\$ 495.00	\$ -
72-inch RCP		EA	\$ 600.00	\$ -
8-inch HDPE		LF	\$ 45.00	\$ -
12-inch HDPE		LF	\$ 65.00	\$ -
Standard Manhole		EA	\$ 14,000.00	\$ -
Junction Structure (with manhole)		EA	\$ 23,000.00	\$ -
Junction Structure (without manhole)		LF	\$ 9,000.00	\$ -
4' Wide Catch Basin and Local Depression		EA	\$ 10,000.00	\$ -
7' Wide Catch Basin and Local Depression		EA	\$ 12,000.00	\$ -
10' Wide Catch Basin and Local Depression		EA	\$ 15,000.00	\$ -
14' Wide Catch Basin and Local Depression		EA	\$ 18,000.00	\$ -
21' Wide Catch Basin and Local Depression		EA	\$ 25,000.00	\$ -
Concrete Collar		EA	\$ 2,000.00	\$ -
Clean Out		EA	\$ 3,000.00	\$ -
Curb Inlet/Outlet		EA	\$ 3,500.00	\$ -
Bio-Swale		LF	\$ 10.00	\$ -
12"x12" Box Inlet		EA	\$ 1,500.00	\$ -
18"x18" or 24"x24" Box Inlet		EA	\$ 2,500.00	\$ -
Total for Storm Drain Improvements			\$	-

By:

Storm Drain Drawing Number(s):

ESTIMATE OF COST FOR TRAFFIC IMPROVEMENTS

Developer: _____

Project: _____

Location: _____

Traffic Improvements	Quantity	Unit	Price	Amount
4" Painted Broken Stripes		LF	\$ 2.00	\$ -
4" Painted Double Solid Stripes		LF	\$ 3.00	\$ -
6" Painted Bike Lane Stripes		LF	\$ 3.00	\$ -
Painted One-Way, No Passing		LF	\$ 2.00	\$ -
Painted Two-Way, Left Turn Lane		LF	\$ 3.00	\$ -
Painted Pavement Markings		SF	\$ 3.00	\$ -
8" Thermoplastic Channelizing Line		LF	\$ 4.50	\$ -
12" Thermoplastic Crosswalk & Limit Line		LF	\$ 6.50	\$ -
Thermoplastic Pavement Markings		SF	\$ 6.00	\$ -
Street Name Sign & Post		EA	\$ 350.00	\$ -
Stop Sign & Post		EA	\$ 300.00	\$ -
Road Sign on existing pole/post (One Post)		EA	\$ 200.00	\$ -
Road Sign on existing pole/post (Two Post)		EA	\$ 300.00	\$ -
Street Sign (Mast Arm Hanger Method)		EA	\$ 800.00	\$ -
Remove Painted Stripes & Pavement Markings		SF	\$ 3.00	\$ -
Remove Thermoplastic Stripes & Pavement Markings		SF	\$ 5.00	\$ -
Traffic Signal & Lighting - New Installation		LS	\$ 325,000.00	\$ -
Traffic Signal & Lighting - Modification		LS	\$ 200,000.00	\$ -
Type E - 6' Round Signal Loops		EA	\$ 600.00	\$ -
Type D - 6' Square Loops with bike detection zone		EA	\$ 800.00	\$ -
Install Pull Box (#5)		EA	\$ 1,500.00	\$ -
Install Pull Box (#6)		EA	\$ 1,700.00	\$ -
Install Pull Box (#6E)		EA	\$ 1,800.00	\$ -
2" Conduit		LF	\$ 36.00	\$ -
3" Conduit		LF	\$ 45.00	\$ -
3" PVC Conduit (for Fiber Optic Cable only)		LF	\$ 45.00	\$ -
24 Single Mode Fiber Optic Cable		LF	\$ 7.00	\$ -
12 Pair Interconnect Cable		LF	\$ 8.00	\$ -
Bike Loops		EA	\$ 600.00	\$ -
Video Detection Camera & Processor		EA	\$ 5,500.00	\$ -
Traffic Signal Cabinet (Caltrans 332)		EA	\$ 25,000.00	\$ -
Total for Traffic Improvements				\$ -

By: _____

Drawing Number(s): _____

ESTIMATE OF COST FOR MISCELLANEOUS IMPROVEMENTS AND FINAL MONUMENTS

Developer: _____

Project: _____

Location: _____

Miscellaneous Items	Quantity	Unit	Price	Amount
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total for Miscellaneous Improvements				\$ -

By: _____

Miscellaneous Drawing Number(s): _____

Miscellaneous Final Monuments	Quantity	Unit	Price	Amount
Monumentation per lot (refundable)		EA	\$ 700.00	\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total for Final Monuments				\$ -

By: _____

Final Map Number: _____

III. BONDS, MAP RECORDATION AND CLEARANCES

A. BONDS

Also see the Web site under Public Works, Land Development/Bonding for additional information (http://ci.upland.ca.org/publicworks/land_dev_bonding.html).

Any work related to a PP, CUP, or MI case, within road right-of-way, which has an estimated construction cost of at least \$50,000.00 or on a General Plan road, need an Encroachment Permit or affecting the travel way, must be bonded. All PM and TR cases irrespective of size requiring improvements must be bonded or the improvements built prior to map recordation per Ordinance. If the construction affects an existing City road, a bond may still be required as determined by the Public Works Department. A lien may be filed on the property to cover the improvements instead of a bond if there will not be any activity for a few years. The process is like a bond and is allowed by ordinance. The Public Works Department bonds for all improvements within the existing and future public right-of-way. Bond amounts are prepared by the design engineer on the City's Construction Cost Estimate and checked by the plan checker assigned to the job. (See Section II.) When the plan checker determines that the plans are "close enough" (so design and quantities of work will not change significantly at final signature), the project can be processed for bonding, typically after the 2nd plan check.

Bond Process Options include:

- | | |
|--------------------------|-------------------------------------------------------------------------------------------------|
| ▪ 100% Bond | Sign Plans, Construct (For MI and Use cases requiring work on City maintained roads per above.) |
| ▪ 100% Bond | Sign Plans, then Record Map |
| ▪ 120% Bond (if allowed) | Record Map, then Sign Plans |
| ▪ 10% Bond | Sign Plans, Construct, and then Record Map |
| • 100% Offsite Bond | Sign Plans, Build, then Record Map (When work on City maintained road required.) |

(All bonded projects post 10% bond after construction for a 1-year period to guarantee materials and workmanship.)

(All maps post 10% bond even if Non-City Maintained.)

The 120% level of bonding is allowed by City Ordinance and is processed at the discretion of the Public Works Department. Reasonable justification and a standard format letter (see Appendix A5) are required to make the request for this type of bond.

All bond amounts must be based on the current Public Works unit costs and standard cost estimate worksheet.

Public Works inspection deposits are 3% of the construction costs for schedule "A" map, not to exceed \$75,000.00, calculated at the 100% level of the construction cost estimate, irrespective of which level of bond is being posted for the project. Such deposits are calculated at the same time the plan checker processes the bond values. The inspection deposit is required prior to map clearance to record. If a lien is being processed, the \$12,000 deposit takes the place of the inspection amount.

Flood Control does not prepare their own cost estimate and those facilities should be included which are maintained by SBCFlood. Drainage facilities to be maintained by Public Works, appearing on Public Works and/or SBFC format sheets, are to be included in the applicant engineers estimate for the Public Works bond. An official letter from Flood Control, on SBFC letterhead and bearing the seal and signature of the SBFCFlood, is required to process any bonding amount for Flood facilities. A cost estimate generated by the applicant engineer is not acceptable.

There are various sureties that are acceptable for covering required improvements including bonds, CDs naming the City of Upland, letters of credit, cash, or property liens. When the bond amount is \$5,000 or less a cash bond is required. See City Ordinance or Map Act.

The Fee and Security Worksheet prepared by the plan checker includes an amount for the Monument Security Bond from the Public Works Office. This data must be generated by the map checker, and only applies to Tract Map and Parcel Map cases.

The Fees and Security Worksheet is sent to the City Engineer by the plan checker, where the actual bonds/agreements are prepared. Once done, the City will notify the developer to pick them up. When executed by the developer/owner and returned they are processed to City Counsel for legal review and approval. Upon approval they are held until the map is ready to be processed.

Public Works holds bonds for Flood Control, districts, and bonds for improvements within the City right-of-way. Bonds need to be in place prior to road closures.

B. STAND ALONE

Every project must “stand alone” and be so designed as if no other project ever constructs, this includes map phases. A project might be designed to rely on another tract to build certain necessary facilities. Projects, however, may go bankrupt, change owners, change construction schedule, or for other reasons become unreliable. The bond for one project cannot be used to cover the obligation of another project, even if it is the same facility, even if it is the same owner. For this reason, each project must “stand alone.”

Each project is required to provide:

- 1) Approved plans (May be done by another engineer.).
- 2) Bond for *all* facilities needed to make project function and as dictated by the conditions of approval.
- 3) Recorded right-of-way, easements, or off-site facilities.

Each project is responsible to connect to an existing, maintained facility. If the connection facility is existing but not maintained by a government agency (City, City, State, District), the facility must also be bonded by the project or as approved by the Public Works Department.

During construction, a bond may be reduced for partially completed work. By ordinance, each reduction is for 1/3 of the bond value.

Every project must “stand alone” as if no other project ever builds or records around it. Every project must provide its own:

- Bond for interior work
- Bond for off-site access work

- Recorded right-of-way, outside map
 - Inspection fee
 - Approved plans
1. Phases of a map may be owned by the same developer “today” but may be sold off to another developer that has a different schedule. Because phases may be bought and sold by others, each project must be self-sufficient and “stand alone”.
 2. The bond for a project must match the exact tract number and phase of the map to be cleared. The bond of one phase cannot be used to pay off the obligation of another phase (i.e., the 29334 bonds cannot be used for obligations in the 29334-2 map).
 3. If an access road to a map might be built by another project, the applicant may provide two bonds on the same project: On-Site bond and Off-Site bond. If the other project builds the required access road, it is simpler to release the Off-Site bond as a package, rather than delay the process by reducing all-encompassing bond item by item, line by line.
 4. Right-of-way for an access road to a map must be provided by dedication by separate instrument, or by an adjacent map recording prior to this project. If the adjacent map is not yet recorded, or the separate instrument is not yet recorded, the project has no legal access and cannot be cleared to record.
 5. Each project must fund its own inspection fees for On-Site and Off-Site work.
 6. No project may refer to unapproved plans. If a project needs another road or other facility to be constructed to make the project function (road, water supply, downstream sewer), it may refer to plans already approved and on file at the City. If the plans by others are not yet approved, the project plans cannot be signed.
 7. In the case of multiple phases of maps utilizing the same access road, the developer may elect to process an “MI” case to avoid multiple bonding of the same facility. The MI case would be a set of street plans to serve the access needs of a series of maps or phases; the bond would name all the tracts to be served, and the project would be bonded only once.

C. MULTIPLE BONDING

As each project must “stand alone”, it is possible that the same facility needed to make several projects function would be bonded several times. As an example: a road that serves four different maps may have to be bonded four separate times, one for each map.

To avoid this and reduce the cost of bond premium to the developer, the City will allow an “MI” case (“Miscellaneous”), which may be an engineer’s drawing of the common facilities that serve multiple projects for the same owner. This would include, but is not limited to street, storm drain, sewer, water, landscape, and streetlight. One bond can be generated for this “MI” case, and that bond will name on it all the tracts that need the common facility to function.

On the improvement drawings for the tract, the title sheet is to show an alignment of the offsite “MI” project on the Index Map, reference for the MI and IP numbers, reference the recorded R/W, and provide a typical section of the offsite road that is to be built with the tract project.

D. FACILITIES BUILT BY OTHERS

Some projects may be designed to rely upon a road, sewer, and water or storm drain system that is currently being built by another project. The “downstream” facility may not yet be accepted for maintenance, even though it exists and is functioning.

In these cases, the Public Works Department may allow a reduced bond for the offsite work being completed by others. It is up to the Construction Inspection Office if and by how much a bond is to be reduced. For water, sewer and SBFC storm drains, the Public Works Department requires consent from the agency of jurisdiction to bond at the reduced level. Otherwise, the 100% level will be required.

E. CALTRANS FACILITIES

Caltrans (California Department of Transportation) has jurisdiction for work on state highways. For map (TR PM) projects conditioned by the City of Upland, a City bond must be posted, including work within state highway right-of-way. If the bond can name the City and the state, one bond may satisfy the requirements. If the bonding company will not allow naming both agencies, Caltrans may require the developer to *also* bond the same facility with the State, or any portion thereof. The City has neither jurisdiction nor control over the bonding requirements imposed by the State. The City requires a bond as a guarantee that the developer will meet the conditions of approval as approved by the City Council. Also see Section XV.

F. PRIVATE FACILITIES

Whether a facility will ultimately be accepted for maintenance by the City of Upland, or will be privately maintained, the project proponent will need to post a bond with the City for conditioned projects. The bond guarantees construction of the facility irrespective of which agency ultimately provides maintenance.



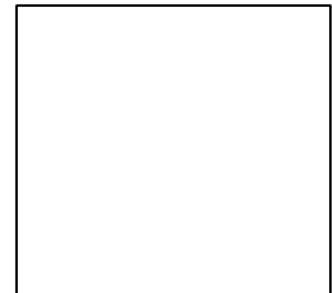
**CITY OF UPLAND
PUBLIC WORKS DEPARTMENT
LAND DEVELOPMENT AND
TRANSPORTATION DIVISION**

**COST ESTIMATE SUMMARY SHEET
Private Improvements**

Developer: _____
Project: _____
Location: _____

Item Description		Estimated Cost
1 . On-Site Improvements	\$	-
2 . Sewer Improvements	\$	-
3 . Water Improvements	\$	-
4 . Drainage Improvements	\$	-
5 . Traffic Improvements	\$	-
6 . Miscellaneous	\$	-
Sub Total	\$	-
20% Contingency	\$	-
Total Amount	\$	-

Estimated By: _____
RCE#: _____
Date: _____



Bonds are not required for private improvements. These calculations are required to determine the Inspection Fee Deposit only. The Developer's Engineer will calculate the estimated cost. The Inspection Fee Deposit must be paid before permits are issued.

3.2

Preliminary Cost Estimate Form for Private On-Site Improvements

Developer: _____
 Project: _____
 Location: _____

Street Items	Quantity	Unit	Price	Amount
Roadway Excavation				\$ -
1. Projects with Grading Plan area X 0.50' (hinge point to hinge point) (_____ SF)		CY	\$ 12.00	\$ -
2. Projects without Grading Plan road area and side slopes to daylight. Cut (C) = Fill (f) =				\$ -
(a) Excavate & Fill		CY (c or f)	\$ 3.00	\$ -
(b) Excavate & Export		CY (c -f)	\$ 1.00	\$ -
PCC Curb and Gutter 6"		LF	\$ 11.00	\$ -
PCC Curb and Gutter 8"		LF	\$ 13.00	\$ -
PCC Sidewalk		SF	\$ 6.00	\$ -
PCC Cross Gutter/Spandrel		SF	\$ 8.00	\$ -
PCC Curb Only 6"		LF	\$ 8.00	\$ -
PCC Curb Only 8"		LF	\$ 10.00	\$ -
Rolled Curb		LF	\$ 12.00	\$ -
PCC Pavement		SF	\$ 8.00	\$ -
Ribbon/Alley Gutter		LF	\$ 12.00	\$ -
Wheelchair Ramp (ADA Compliant)		EA	\$ 1,600.00	\$ -
Drive or Alley Approach		SF	\$ 8.00	\$ -
Asphalt Concrete (144 lbs./ft ³)		TON	\$ 76.00	\$ -
AC Patch-Trench (Match Existing)		SF	\$ 4.00	\$ -
Grind & AC Overlay @ 0.50 inch		SF	\$ 3.00	\$ -
Aggregate Base CL II		CY	\$ 44.00	\$ -
AC Berm		LF	\$ 11.00	\$ -
Street Lights Underground + Trench (Standard Marbelite)		EA	\$ 4,800.00	\$ -
Street Lights Underground + Trench (Decorative)		EA	\$ 5,600.00	\$ -
Install Barricades		LF	\$ 88.00	\$ -
Remove Barricades		LF	\$ 8.00	\$ -
Remove AC Pavement		SF	\$ 2.00	\$ -
Remove PCC Curb		LF	\$ 8.00	\$ -
Adjust Sewer Manhole to grade		EA	\$ 400.00	\$ -
Adjust Water Valve to grade		EA	\$ 240.00	\$ -
Sawcut		LF	\$ 2.00	\$ -
Decorative Concrete		SF	\$ 10.00	\$ -
Underwalk Drain		EA	\$ 1,440.00	\$ -
Parkway Trees		EA	\$ 280.00	\$ -
Parkway Landscape and Irrigation		SF	\$ 1.00	\$ -
Install Chain Link Fence		LF	\$ 13.00	\$ -
Irrigation Backflow Prevention Assembly (w/ enclosure)			\$ -	\$ -
Relocate Power Pole		EA	\$ 8,000.00	\$ -
Total for On-Site Improvements				\$ -

By: _____
 On-Site Drawing Number(s): _____

3.3

Preliminary Cost Estimate Form for Private Sewer Improvements

Developer: _____

Project: _____

Location: _____

Sewer Items	Quantity	Unit	Price	Amount
Sewer Manholes (48-inch Diameter)		EA	\$ 3,600.00	\$ -
Sewer Drop manholes (48-inch Diameter)		EA	\$ 4,400.00	\$ -
Sewer Cleanouts		EA	\$ 800.00	\$ -
6-inch VCP Sewer Laterals		LF	\$ 48.00	\$ -
8-inch VCP Sewer Mainline		LF	\$ 68.00	\$ -
10-inch VCP Sewer		LF	\$ 88.00	\$ -
12-inch VCP Sewer		LF	\$ 96.00	\$ -
Concrete Encasement 8-inch		LF	\$ 12.00	\$ -
Concrete Encasement 10-inch		LF	\$ 14.00	\$ -
Concrete Encasement 12-inch		LF	\$ 16.00	\$ -
8-inch CIP Mainline		LF	\$ 120.00	\$ -
Adjust Cleanout to Grade		EA	\$ 240.00	\$ -
Adjust Manhole to Grade		EA	\$ 480.00	\$ -
Remove Manhole		EA	\$ 1,600.00	\$ -
Connect to Existing Manhole and Re-channel		EA	\$ 1,440.00	\$ -
Backflow Device		EA	\$ 640.00	\$ -
8-inch x 4-inch Sewer Wye		EA	\$ 480.00	\$ -
Grease Interceptor		EA	\$ 6,000.00	\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total for Private Sewer Improvements				\$ -

By: _____

Sewer Drawing Number(s): _____

3.4

Preliminary Cost Estimate Form for Private Water Improvements

Developer: _____

Project: _____

Location: _____

Water Items	Quantity	Unit	Price	Amount
6-inch Water main		LF	\$ 52.00	\$ -
6-inch Valve		EA	\$ 1,040.00	\$ -
8-inch Water main		LF	\$ 64.00	\$ -
8-inch Valve		EA	\$ 1,200.00	\$ -
6-inch Fire Hydrant Assembly		EA	\$ 4,640.00	\$ -
12-inch Valve		EA	\$ 2,960.00	\$ -
Upgrade 4-inch Fire Hydrant Assembly to 6-inch		EA	\$ 4,000.00	\$ -
Relocate 6-inch Fire Hydrant Assembly		EA	\$ 1,920.00	\$ -
2-inch Water Service		EA	\$ 2,400.00	\$ -
1 1/2-inch Water Service		EA	\$ 1,840.00	\$ -
1-inch Water Service		EA	\$ 1,440.00	\$ -
2-inch Air Vacuum Release Valve		EA	\$ 2,800.00	\$ -
Blind Flange		EA	\$ 480.00	\$ -
Relocate Existing Water meter		EA	\$ 480.00	\$ -
6-inch Fire Service		LF	\$ 44.00	\$ -
Backflow Device		EA	\$ 2,240.00	\$ -
8-inch Fire Service with Vault and Valve		EA	\$ 5,600.00	\$ -
6-inch Fire Service with Vault and Valve		EA	\$ 4,800.00	\$ -
4-inch Fire Service with Vault and Valve		EA	\$ 4,000.00	\$ -
4-inch Modified Blow-Off Assembly		EA	\$ 2,160.00	\$ -
Blow Off Assembly		EA	\$ 2,160.00	\$ -
Recycled Water Line, Irrigation		LF		\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total for Private Water Improvements				\$ -

By: _____

Water Drawing Number(s): _____

3.5

Preliminary Cost Estimate Form for Private Storm Drain Improvements

Developer: _____

Project: _____

Location: _____

Storm Drain Items	Quantity	Unit	Price	Amount
18-inch RCP		LF	\$ 100.00	\$ -
24-inch RCP		LF	\$ 116.00	\$ -
30-inch RCP		LF	\$ 124.00	\$ -
36-inch RCP		LF	\$ 152.00	\$ -
42-inch RCP		LF	\$ 172.00	\$ -
48-inch RCP		LF	\$ 192.00	\$ -
54-inch RCP		LF	\$ 220.00	\$ -
60-inch RCP		LF	\$ 256.00	\$ -
72-inch RCP		LF	\$ 375.00	\$ -
8-inch HDPE		LF	\$ 32.00	\$ -
12-inch HDPE		LF	\$ 36.00	\$ -
Standard Manhole		EA	\$ 3,600.00	\$ -
Junction Structure (with manhole)		EA	\$ 2,880.00	\$ -
Junction Structure (without manhole)		LF	\$ 2,000.00	\$ -
4' Wide Catch Basin and Local Depression		EA	\$ 4,000.00	\$ -
7' Wide Catch Basin and Local Depression		EA	\$ 4,800.00	\$ -
10' Wide Catch Basin and Local Depression		EA	\$ 5,600.00	\$ -
14' Wide Catch Basin and Local Depression		EA	\$ 6,800.00	\$ -
21' Wide Catch Basin and Local Depression		EA	\$ 7,600.00	\$ -
Concrete Collar		EA	\$ 1,200.00	\$ -
Clean Out		EA	\$ 1,200.00	\$ -
Curb Inlet/Outlet		EA	\$ 2,000.00	\$ -
Bio-Swale		LF	\$ 7.00	\$ -
12"x12" Box Inlet		EA	\$ 800.00	\$ -
18"x18" or 24"x24" Box Inlet		EA	\$ 1,200.00	\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total for Private Drainage Improvements				\$ -

By: _____

Storm Drain Drawing Number(s): _____

Preliminary Cost Estimate Form for Private Traffic Improvements

Developer: _____

Project: _____

Location: _____

Traffic Improvements	Quantity	Unit	Price	Amount
4" Painted Broken Stripes		LF	\$ 1.60	\$ -
4" Painted Double Solid Stripes		LF	\$ 0.40	\$ -
6" Painted Bike Lane Stripes		LF	\$ 0.60	\$ -
Painted One-Way, No Passing		LF	\$ 0.30	\$ -
Painted Two-Way, Left Turn Lane		LF	\$ 0.70	\$ -
Painted Pavement Markings		SF	\$ 2.40	\$ -
8" Thermoplastic Channelizing Line		LF	\$ 1.60	\$ -
12" Thermoplastic Crosswalk & Limit Line		LF	\$ 2.40	\$ -
Thermoplastic Pavement Markings		SF	\$ 3.20	\$ -
Street Name Sign & Post		EA	\$ 240.00	\$ -
Stop Sign & Post		EA	\$ 240.00	\$ -
Road Sign on existing pole/post (One Post)		EA	\$ 160.00	\$ -
Road Sign on existing pole/post (Two Post)		EA	\$ 240.00	\$ -
Street Sign (Mast Arm Hanger Method)		EA	\$ 400.00	\$ -
Remove Painted Stripes & Pavement Markings		SF	\$ 2.40	\$ -
Remove Thermoplastic Stripes & Pavement Markings		SF	\$ 4.00	\$ -
Traffic Signal & Lighting - New Installation		LS	\$ 240,000.00	\$ -
Traffic Signal & Lighting - Modification		LS	\$ 160,000.00	\$ -
Type E - 6' Round Signal Loops		EA	\$ 480.00	\$ -
Type D - 6' Square Loops with bike detection zone		EA	\$ 640.00	\$ -
Install Pull Box (#5)		EA	\$ 400.00	\$ -
Install Pull Box (#6)		EA	\$ 560.00	\$ -
Install Pull Box (#6E)		EA	\$ 640.00	\$ -
2" Conduit		LF	\$ 20.00	\$ -
3" Conduit		LF	\$ 24.00	\$ -
3" PVC Conduit (for Fiber Optic Cable only)		LF	\$ 24.00	\$ -
24 Single Mode Fiber Optic Cable		LF	\$ 3.20	\$ -
12 Pair Interconnect Cable		LF	\$ 4.00	\$ -
Bike Loops		EA	\$ 240.00	\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Total for Traffic Improvements				\$ -

By: _____

Drawing Number(s): _____

3.7

Preliminary Cost Estimate Form for
Private Miscellaneous Improvements

Developer: _____

Project: _____

Location: _____

Miscellaneous Items	Quantity	Unit	Price	Amount
Sub-total for Miscellaneous Improvements				

By; _____

Miscellaneous Drawing Number(s): _____

G. MAP RECORDATION

5.1 Submission of Tract and Parcel Maps For Plan Check

For review of final Tract or Parcel Maps, please submit the following files:

If Hardcopies:

4 sets	TRACT/PARCEL MAP (bond)
2 copies	TITLE REPORT (prepared within the last 90 days)
2 sets	RECORD DOCUMENTS (referenced in Schedule B of Title Report)
1 set	RECORD MAPS (as referenced on new final map)
1 copy	APPROVED TENTATIVE MAP
2 copies	FINAL APPROVED CONDITIONS OF APPROVAL
2 sets	CLOSURE CALCULATIONS
1 each	MAP REVIEW FEE (See section 1.0)

Rechecks

The last set of the map checker's redline prints of the map and two (2) sets of revised prints shall be submitted for subsequent map checks.

Final Review and Approval

When map checking is completed, the following is required for processing through City Council.

City Council meets the second (2nd) and fourth (4th) Monday of each month. The following items must be submitted (in final form) before noon on the Tuesday preceding the Council meeting.

1. An original of the map and one set of mylar prints shall be submitted, in final form, complete with all signatures.
2. Subdivision agreements shall be completed on the City of Upland forms, with all signatures.
3. Subdivision bonds shall be submitted. The form provided by the bonding company is acceptable.
4. All other documents required by the conditions of approval that must record with the final map (i.e. Landscape Maintenance Agreements, CC&R's, Aviation/Noise Easements, Reciprocal Parking agreements, etc.).
5. All outstanding fees must be paid in full.

H. FINAL MAP CHECKLIST, CERTIFICATE & REQUIREMENTS

The Improvement Plan Checker needs to review the final map for the following:

1. Use correct, updated name for City Surveyor and Clerk of the Board.

2. Approval date and expiration date of the map.
3. Owner's statement dedicates storm drain/access easements, streets, landscapes, etc. to public if Public Works is to maintain. If privately maintained the easements should be reserved.
4. Board of Supervisors statement accepts (or does not accept) easements. Typically, if the facility is to be maintained by city, City or state government, it should be accepted.
5. Easements shown on map should indicate to whom the easement is being dedicated in the statements, and what it is for.
6. Flood Control easements are processed as follows:

Easements dedicated on maps for Flood Control purposes cannot be accepted by the City of Upland. The City cannot act on behalf of County Flood Control as the City and Flood are not the same entity.

Easements for SBCFC may be dedicated to the Public and shown as "not accepted" on the Board of Supervisor statement. After construction of the SBCFC facility, Flood Control will request Public Works to process an acceptance of the easement and will quitclaim the public's interest to Flood Control.

Format of an SBCFC easement on a map:

"We hereby dedicate to the PUBLIC an easement over Lot(s) _____ for flood control purposes."

OR

"We hereby dedicate to the PUBLIC a (n) (_____-foot) (storm drain/flood control/retention basin/drainage access) easement(s) as shown hereon, for flood control purposes."

Examples: We hereby dedicate to the PUBLIC, a storm drain easement within Lot 52 and shown hereon, for flood control and maintenance purposes."

We hereby dedicate to the PUBLIC, a 20-foot drainage easement as shown hereon for flood control and maintenance purposes."

7. Centerline bearings & distances on final map need to match street plans.
8. Storm drain easements for Public Works need to be shown on one lot, not split on a lot line, and are to be accepted in the maintained road system.
9. Easements shall conform to the naming convention as called out on the Map.
10. Retained lots are used for private dedications and maintenance.

5.2

Tract Map and Parcel Map Check List

Project No. _____ Map No. _____ Checked by: _____

Map Check Deposit: _____ Receipt Number: _____ Date: _____

Map Number _____ Expiration Date _____

Subdivider _____ Surveyor/Engineer _____

Other Identify _____

Check Print Number _____ Lots _____

Approved _____

I. Title Sheet

Please make comments on the face of the attached check print and return to this office. Any new additions or corrections other than those marked in red by our offices shall be labeled, underlined or in some manner made highly distinguishable along with calculations, if deemed necessary, for our office to check.

I. Authority

1. Subdivision Map Act
2. Land Surveyors Act
3. City Standards and Ordinance

II. Certificates

1. Acknowledgment
2. Acceptance
3. Auditor
4. Board of Supervisors
5. City Engineer
6. Owner
7. Records Square $3\frac{1}{4} \times 3\frac{1}{4}$ inches
8. Signature Omissions
9. Surveyor or Engineer
10. Other: _____

III. Map Notes

Basis of Bearing:

1. Labeled on Map
2. Two monuments on the same line and shown on a recorded or filed map
3. Solar or stellar observation
4. California coordinate system (must include the zone and at least two stations)
5. Minor subdivisions number

Symbols and Abbreviations:

1. Closed circles or squares for found monuments
2. Open circles or squares for set monuments. Must include type, size, length, RCE or LS number
3. Define abbreviations

Tract Map and Parcel Map Checklist (Continued)

Surveyors Notes:

1. Where block walls may be installed at property lines, call out monumentation note to reflect both types (i.e. "all rear lot corners to be set with 1" iron pipe, 18" long, tagged LS _____, Flush. In the event the position of the rear lot corner falls on the wall, a lead and LS_ tag will be set on the face of the block wall to indicate the direction of the side lot lines).
2. Curb monumentation note: Set nail and tag LS _____ in the top of the curb at the prolongation of side lot lines for front corners.

IV. Mathematical Accuracy

1. Closure Unacceptable
2. Not Checked
3. Bearings Missing or Incorrect
4. Distance Missing or Incorrect
5. Center Line will now reconcile with right-of-way
6. Sum of parts equals the total distance
7. Curve Data
8. Radial Bearings
9. Acreage to hundredths (final maps with lots 1 acre and larger)

V. Survey Procedures

1. Additional Survey Information required
2. Chain of Title, deed interpretation incorrect, Deed Reference
3. Disagrees with Record Data
4. Monuments to County Standard
5. Proportion Incorrect
6. Sectional Breakdown Incorrect
7. Label Fractional Section Corners
8. Record measurements in parenthesis when a material discrepancy exists or beneficial to map interpretation
9. Reference for all found monuments or statement of acceptance if used as control monuments
10. Ties to adjacent tract lines, street C/L or section lines

VI. Map Body

1. Map Size, 18" x 26", with 1" blank border on all sides
2. Map orientation, title and map body to read from bottom or right side of sheet when north arrow points away from reader
3. Map Subtitle Description
4. North Arrow and Scale
5. Sheets Numbered
6. Index Map (500 scale)
7. Current Title Report
8. Legibility of Map Data
9. Remove Advertising
10. City, County or State boundaries shown
11. Conforms to approved tentative map and conditions of approval
12. Data on soil test report delineated
13. Dedication shown and labeled
14. Delineate boundary of original parcel with a line three (3) times wider than all other lines
15. Delineate B.S.L.
16. Detail required for clarity
17. Delineate easements of record
18. Lot and parcel numbering
19. Midpoint of curve or P.I. monument
20. Non-access or non-vehicular access PUE or Private Road Easement

Tract Map and Parcel Map Checklist (Continued)

21. Recording Information
22. Reference to adjacent maps of record, shown with dashed lines and recording data
23. Remainder Parcel
24. Reserve Parcel
25. (S.B.C.F.C.D.E.) and private D.E.'s
26. Sewer Easements
27. Show adjacent Streets
28. Spelling
29. Street C/L dashed
30. Street names and widths to City Standards
31. Tie point numbers shown
32. Water Line Easement
33. Other: _____
34. Other: _____

VII. Final Subdivision Map Check

1. Cash Staking Deposit for Deferred Monumentation \$ _____
2. Sufficient Processing deposit prior to recordation
3. Tie Sheets
4. Prints to Planning Department
5. Prints to Zoning
6. Prints to Building & Safety
7. Prints to Street Addresses
8. Prints to Fire Warden
9. Control boundary monuments shall be set and are subject to inspection before recordation of final maps.
All monuments to be set before recordation of Parcel Maps.

Comments:

By: _____

Date: _____

- ☐ Please submit _____ corrected copies with redlined print and this checklist.
- ☐ Please submit original signed maps with one corrected copy.

5.3

Final Map Certificates

OWNERS STATEMENT:

WE HEREBY STATE I/WE ARE ALL AND THE ONLY PARTIES HAVING ANY RECORD TITLE INTEREST IN THE LAND SUBDIVIDED AS SHOWN ON THIS MAP AND I/WE CONSENT TO THE PREPARATION AND RECORDATION OF THIS PARCEL MAP.

(LIST ANY OFFERS OF DEDICATION OR SPECIAL CONDITIONS)
(INCLUDE ALL OWNERS)

DATED: _____
NAME _____

(IF APPLICABLE)

BANK NAME

d/b/a (FILL IN CORPORATION NAME) AS BENEFICIARY UNDER TRUST DEED RECORDED
(FILL IN MONTH DATE YEAR), AS INSTRUMENT NUMBER (FILL IN DOCUMENT #) OR

BY: _____

NAME: _____

TITLE: _____

SURVEYOR'S STATEMENT:

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF _____, ON _____. I HEREBY STATE THAT THIS PARCEL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OR CONDITIONALLY APPROVED TENTATIVE MAP, IF ANY.

DATED: _____
NAME _____ LS/RCE NUMBER _____

CITY ENGINEERS STATEMENT:

I HEREBY CERTIFY THAT I HAVE EXAMINED THE ANNEXED MAP AND THAT THE SUBDIVISION SHOWN THEREON IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP AND ANY APPROVED ALTERATIONS THEREOF AND THAT ALL PROVISIONS OF THE SUBDIVISION MAP ACT AND CITY OF UPLAND MUNICIPAL CODE HAVE BEEN COMPLIED WITH.

DATED: _____

DIRECTOR OF PUBLIC WORKS
CITY OF UPLAND, CALIFORNIA
R.C.E. NO.

I AM SATISFIED THAT THIS MAP IS TECHNICALLY CORRECT.

DATED: _____

CITY SURVEYOR, LS

Final Map Certificates (Continued)

ADD NOTICE: A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THIS DOCUMENT.

NOTARY ACKNOWLEDGEMENT (MUST COMPLY WITH LATEST STATE OF CALIFORNIA APPROVED NOTARY ACKNOWLEDGEMENT STATEMENT/LANGUAGE)

STATE OF CALIFORNIA _____)
COUNTY OF _____) SS

ON, _____ BEFORE ME, _____ PERSONALLY APPEARED, PERSONALLY KNOWN TO ME (OR PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME IN THEIR AUTHORIZED CAPACITIES, AND THAT BY THEIR SIGNATURES ON, THE INSTRUMENT THE PERSONS, OR THE ENTITY UPON BEHALF OF WHICH THE PERSONS ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY THAT UNDER THE PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

SIGNATURE OF NOTARY

DATE COMMISSION EXPIRES

NAME OF NOTARY

PRINCIPAL COUNTY OF BUSINESS

COMMISSION NO. _____

CITY PLANNING COMMISSION CERTIFICATE:

I HEREBY CERTIFY THAT THE SUBDIVISION SHOWN ON THE ANNEXED MAP IS IN ACCORDANCE WITH THE TENTATIVE MAP REVIEWED AT A MEETING OF THE PLANNING COMMISSION OF THE CITY OF UPLAND, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, HELD ON THE _____ DAY OF _____, 20____.

DATED: _____

SECRETARY OF PLANNING COMMISSION
CITY OF UPLAND, CALIFORNIA

CITY CLERKS CERTIFICATE

I HEREBY CERTIFY THAT THE CITY COUNCIL OF THE CITY OF UPLAND BY A MOTION DULY SECONDED AND PASSED, APPROVED THE ATTACHED MAP ON THE _____ DAY OF _____, 20____ AND FOUND THIS MAP TO BE CONSISTENT WITH APPLICABLE GENERAL OR SPECIFIC PLANS OF THE CITY OF UPLAND.

(PROVIDE ALL EXCEPTIONS)

DATED: _____

CITY CLERK, CITY OF UPLAND, CALIFORNIA

Final Map Certificates (Continued)

AUDITOR'S CERTIFICATE

I HEREBY STATE THAT ACCORDING TO THE RECORDS OF THIS OFFICE, AS OF THIS DATE, THERE ARE NO LIENS AGAINST THE REAL PROPERTY SHOWN UPON THE ANNEXED MAP FOR UNPAID STATE, COUNTY, MUNICIPAL, OR LOCAL TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES, EXCEPT TAXES OR SPECIAL ASSESSMENTS NOT YET PAYABLE, ESTIMATED TO BE \$ ____.

DATED: _____

(INSERT NAME OF COUNTY AUDITOR), COUNTY
AUDITOR
COUNTY OF SAN BERNARDINO CALIFORNIA

BY: _____, DEPUTY

BOARD OF SUPERVISOR'S CERTIFICATE

I HEREBY STATE THAT A BOND IN THE SUM OF \$ _____ HAS BEEN EXECUTED AND FILED WITH THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, CONDITIONED UPON THE PAYMENT OF ALL TAXES, STATE, COUNTY, MUNICIPAL, OR LOCAL, AND ALL SPECIAL ASSESSMENTS, COLLECTED AS TAXES WHICH AT THE TIME OF FILING OF THE ANNEXED MAP WITH THE COUNTY RECORDER, ARE A LIEN AGAINST SAID PROPERTY, BUT NOT YET PAYABLE, AND THAT THE SUBDIVIDER HAS FILED WITH ME A CERTIFICATE BY THE PROPER OFFICER, GIVING HIS ESTIMATE OF THE AMOUNT OF SAID TAXES AND ASSESSMENTS, AND SAID BOND IS HEREBY ACCEPTED.

DATED: _____

(INSERT NAME OF CLERK)
CLERK OF THE BOARD OF SUPERVISORS
OF THE COUNTY OF SAN BERNARDINO

BY: _____, DEPUTY

I. MAP CLEARANCE WITH IMPROVEMENT PLANS

For the Public Works Department to clear a map for recordation, the following items must be addressed:

1. 100% Bond level
 - a. Plans signed
 - b. Inspection deposit paid
 - c. Bonds approved by City Council
2. 120% Bond Level
 - a. Inspection deposit paid and any Plan Check deposit still due.
 - b. Bonds approved by City Council
 - C. Offsite R/W, easements and/or permission to grade obtained

3. 10% Bond Level

- a. Inspection deposit paid
- b. Bonds approved by City Council
- c. Notice of Completion issued by Inspection

Other items that must be addressed for map recordation may include Assessment District, offsite R/W recordation, offsite easement recordation, landscape annexation application, and other issues to each individual project.

The offsite right-of-way and offsite easements need to be cleared environmentally, in the same way as the project itself was cleared, as well as recorded prior to or concurrently with the map.

A request to clear the map must be made to the plan checker. If the project is checked by City staff, they are the ones to clear the route and conditions in the computer system. If the plans were checked by a consultant plan checker, they will let the plan check supervisor know that the map can be cleared, and the supervisor will assign in-house staff to clear this map in the computer system.

When developer wishes to have their map cleared to record from the Public Works Department, the following items must be verified:

- Improvement plans are signed*
 - Bonds are approved by City Council
 - Inspection deposit is paid
 - RBBD/Assessment District COAs are noted "MET" or "DEFERRED"
 - BMP, graffiti, signal, streetlight annexation COAs are noted "MET" or "DEFERRED"
 - (*=Plans may be "close" to signature or if a 120% bond is posted)
1. Plan Check does not know the developers schedule for map clearance, therefore the engineer or developer needs to contact the plan checker when they believe they have met the criteria for map clearance to record. Some developers will wait several months after plan approval before seeking clearance on map recording.
 2. Plan checker will then research the criteria listed above, and provide a response if the map can, or cannot, be cleared to record. If the street plans were checked by a consultant checker, they will notify the plan check supervisor to begin map clearance.
 3. CFD, RBBD/Assessment District COAs are cleared by other staff. The plan checker will contact the staff member responsible for this clearance and request it be reviewed and cleared to satisfy COA. (CFD, RBBD and TUMF), Assessment District by the Plan Checker.

4. Street Light Annexation COA is cleared by Plan Check based on the recommendation by others. This is to guarantee funding of the energy charges for the lights, annexation application, and other streetlight related functions. Plan Check will contact the party needed to request their recommendation for clearing these COA's.
5. If development is not in CSA jurisdiction, then developer needs to apply for annexation to related maintenance district for all LLMD conditions and provide documentation by the district confirming annexation was applied for signal maintenance, graffiti abatement, streetlights, landscaping, and street sweeping.
6. City ordinance allows a developer to post a bond of 120% of the total construction cost on a project. With a 120% bond in place, the map can be recorded without the plans being signed. The plan checker must be convinced that the plans are "sufficiently close" to the final quantities to allow the 120% level bond. The developer is obligated to continue the plan check process after the map is cleared to record. The sample letter for requesting 120% bonding is provided in the Appendix.
7. All public works map conditions should be moved to the building permit or occupancy milestone.

J. MAP CLEARANCE WITHOUT PLANS

There are some projects which do not require any improvements as a condition to record the map. Plan Check can clear such a map at the developer's request.

1. To clear such a project to record, the developer/engineer should submit a package of:
 - Final Map
 - Conditions of Approval (COA)
 - Tentative Map
 - Grading Plan (if available)
2. Projects may not require additional road improvements, however any road improvements that are volunteered by the applicant must go through plan review, obtain an encroachment permit, and pay inspection fees. This would include such right-of-way work as:
 - Curb, gutter, sidewalk, landscaping, street lights
3. If there are existing public-record plans that cover the area, it may be possible to revise a set of existing drawings rather than generate a whole new set of plans.

Clearance after construction

1. After project construction, the clearance should be requested through the inspector on the project. Typically any tract will be cleared by personnel in public works.

All other cases (not related or part of a map) will be cleared by the Permit section.

4. Bond release for unrecorded maps (withdrawn)

- To release bonds, a letter requesting release is required to be sent to the City engineer. It will need to include case number, project number (if different), owner and engineer, as well as reason for request.
- Once received, the Construction Office will contact Flood Control, water and/or sewer district to inquire about any facilities they may have and to get concurrence for bond release.
- Also, Construction will contact Survey for the original executed agreements and notify them to place a hold on the case until bonds are resubmitted.
- The account balances are checked and if all accounts are up to date, a hold is placed on them and bonds can be picked up at the office and a release is issued for the bonds.

IV. STREET IMPROVEMENT PLAN CHECKLIST (Public and Private)

Project No. _____ Plan No. _____ Checked by: _____

Plan Check Deposit: _____ Receipt Number: _____ Date: _____

Please note that street improvement plans and profiles are required for public and private street improvements.

A. TITLE SHEET

1. Vicinity Map with project location and north arrow
2. General Notes (list all improvement plans used as a reference in preparation of those plans in the general notes)
3. Construction Notes with quantity estimate
4. Index Map with Street Names (show flows around tract if necessary)
5. Legend of symbols and abbreviations
6. City of Upland bench mark, basis of bearings
7. Name, address, and telephone numbers of the developer/owner, civil engineer, and soils engineer
8. Project and Plan Numbers in the lower right corner of the plan
9. City-approved title/signature block (tract or parcel #, CUP, SP, etc.)
10. Civil Engineer's seal and signature
11. Underground Alert Notice
12. Private Engineer's note
13. "Survey Monument" and "Contractor's Responsibility for Safety" notes
14. Typical section(s) for all adjacent streets
15. Review Conditions of Approval and complete all requirements.
16. Confirm that plan check fees have been paid prior to permit issuance.
17. Declaration of Engineer of Record

B. PLAN SHEETS

1. Review Conditions of Approval for requirements.
2. North arrow (pointing to the top or to the right of the sheet)
3. Stationing shall increase to the north or east and conform to any previous/referenced plans.
4. Provide station equations and street names at intersections.
5. Street names shown on all streets, show street name signs with construction note (CU-G-2, 3 and 4)
6. Station and elevation at EC's, BC's, ECR's, BCR's, beginning and end of improvements, parkway drains, catch basins, etc.
7. Scale bar on all sheets 4 inch
8. Show bearings on all streets and cross-streets, radial bearing on centerline of all catch basins, etc. along a curve (CU-D-4). Curve or line table may be used.
9. Lot lines, lot numbers, and lot frontage dimensions
10. Show City limit lines, if applicable.
11. Curb return data (delta, radius, tangent, length); grade of intersecting street
12. Centerline curve data, and short and long side of curbed section
13. Label curb types, cross gutters, and all structures.
14. Note connections to existing improvements.
15. Transitions (length and stations) shall be minimum 2:1 for widening traffic and 10:1 for merging traffic on low speed roads. For roads with speed greater than 35 mph, tapers shall be per Caltrans standards. Major streets may require larger tapers, Type "L" markers 10 feet on center along taper (CU-G-1)
16. Show improvements to be constructed with solid lines. Existing or future improvements with dashed lines and proper label. Reference adjacent developments

17. Provide construction notes applicable to each sheet.
18. Obtain and show any required easements. Letters of permission are required for any grading and/or drainage beyond the project boundary.
19. Show existing and/or proposed ROW and topography a minimum of 100 feet beyond proposed improvements.
20. Show driveways and driveway widths.
21. Provide intersection site distances.
22. Confirm utility crossings.
23. Provide match lines and identical points on consecutive sheets. Provide reference to other sheets.
24. Minimum 200-foot centerline radius on residential streets, unless prior approval obtained
25. Curb returns shall be 35-foot radius at secondary or major streets, all others shall be 25-foot radius.
26. Provide wheel chair ramps at all curb returns
27. Provide ADA compliant right-of-way and improvement widths.
28. Show all existing above-ground and underground facilities with a note as to their disposition (pipelines, trees, power poles, etc.).
29. Provide details of all improvements, if not City-standard.
30. Show limits for each curb transition.
31. Use splash curbs on all downhill side of curb returns or drive approaches along major water carrying streets. Use 12" high splash curb when the curb is 10" or greater and 18" when curb is less than 10" high.
32. Show limits of new paving, old paving, overlay and removal. Use appropriate shading to delineate areas (CU-D-1). Select streets are to be built by staged construction (CU-R-1).
33. Right-of-way adjacent sidewalk is standard. If curb-adjacent sidewalk exists within block, continue sidewalk to street intersection and transition through return back to right-of-way adjacent sidewalk. Sidewalk shall be 6 feet wide in business districts (CU-P-7, CU-R-5, and CU-P-3).
34. Provide detail and direction of flow with arrows of cross gutter and aprons (CU-D-3, CU-R-3).
35. Provide flow line elevations on all BCRs, ECR's and on the flow line of cross gutters (CU-D-3, CU-R-6).
36. If cross gutter has upstream drainage area greater than 1,000 feet in length, provide 10-foot wide cross gutter. Otherwise it shall be 6-foot width. Show width type on plans (CU-R-3)
37. No mid-block cross gutters or cross gutter across major through streets
38. On match-up paving situations, minimum cross slopes are to be 1% for driving lanes, 3-4% for shoulders, maximum is 2% driving lane & 6% shoulders. Cross slopes to be computed from lip of gutter; bird baths shall be eliminated.
39. Show the location, length, elevations & cross section of any Asphalt Berm to be constructed.
40. Show any required traffic striping or any striping that will need to be replaced due to construction.
41. Show location, size & variety of all existing street trees. Show all proposed street tree(s), variety & quantity on each street. Tree varieties for select streets are shown on CU-P-6. For streets not listed or new streets, the tree variety may be obtained from the Public Works Department. Street tree spacing is 40 feet \pm depending on tree type.
42. Saw cut EP to straight line on match-in paving situations, or remove redwood headers.
43. Barricade required at temporary dead end streets or sidewalks.
44. Show any required "raised traffic marker" spacing diagram.
45. 2" x 4" redwood headers required at edges of paving that are not adjacent to gutters or existing paving, except for the 2:1 and 10:1 tapers.
46. All removals of paving or overlays within existing traveled way shall be per standard (CU-Z-3).
47. No driveways allowed on the south side of the street opposite a "T" intersection
48. Block walls connected with back-up lot treatment will be placed at the top of any slopes adjacent to the street. Wall details (other than standard garden walls) are required. Maximum wall height shall be 6 feet.
49. Verify that no proposed drive approaches cover any existing or proposed sewer or water laterals. All drive approaches shall be shown and noted (CU-P-4, CU-P-5).
50. At entrances to a PRD from major streets, provide a median on the private street for efficient traffic flow.
51. A slope letter is required if the cut or fill at end or side of a street adjacent to the subdivision boundary exceeds one-foot (2:1 slope maximum).
52. Alley approaches with a center gutter requires an under sidewalk drain. Show flowline elevations on plan (CU-R-4, CU-P-3).

53. Check grading plan for interior streets on all PRD.
54. Check subdivision boundaries for problems such as blocked drainage from or discharging to adjacent lands or conflicts between existing and proposed improvements.
55. Check for ponding on streets or at cross gutters.
56. Show irrigation facilities. Note areas where irrigation lines may be affected
57. Show locations of proposed fire hydrants and water valves, and manholes to be adjusted to grade.
58. Show the existing streetlights in the area on both sides of the street & the distance from the project limit. Submit this information to the Traffic Engineer to determine if any new lights are required.
59. A minimum of a 12' paved access is required to all public facilities. Access shall be clear of all obstructions including roof overhang
60. $\frac{3}{4}$ " plywood false bottoms to be placed in all sewer manholes within the construction area
61. Provide trap at first manhole downstream of proposed improvements.
62. If applicable, check for designated Handicapped Route through the project.

C. PROFILE

1. Scale (horizontal and vertical). Show datum elevations at both ends of sheet.
2. Profile or centerline of existing and perimeter streets and existing ground line shall be dashed.
3. Provide stationing at bottom of profile.
4. Provide names and stationing of intersecting streets.
5. Label and show stations and elevations at the beginning and end of all curb returns, vertical curves, transition sections, grade breaks, and beginning and end of improvements.
6. Indicate lengths of curb returns and lengths of horizontal curves. Show to true scale. $\frac{1}{4}$ delta points to be shown on all returns with elevations; show intersecting street grade %
7. Minimum fall around curb returns shall be 0.4%. Show profile going into & out of return. Check shoulders around returns for excessive slope (maximum 6%). Check elevations using an approved method.
8. Use straight grade for cross gutters (CU-R-6). Maximum 2.5% coming into cross gutter. PI for vertical curve minimum of 50' back from flow line of cross gutter. On streets where the grade is 5% or greater, a grade of 4.5% into cross gutter is acceptable.
9. If curbs are variable height, show TC and FL elevations, flow line profile with grade
10. Label all grade lines and profiles. Also show size of curb face (CU-D-5).
11. Profile of existing centerline or elevations at least every 50 feet.
12. Show profile of existing EP with elevations at least every 50 feet.
13. Show profile of existing ground at property line.
14. Check that all slopes are shown correctly compared to elevations given.
15. Show connection with or future design to existing improvements, along with existing elevations. Show grade on existing improvements.
16. Extend profiles 300' beyond end of improvements necessary to justify proposed grades
17. Show profile of finished centerline & top of curbs (solid line), show grades (0.4% minimum) (CU-D-5)
18. Show profile of $\frac{1}{4}$ crown if necessary. Show grade.
19. Grade of major & secondary streets should not exceed 8%, residential streets should not exceed 16%.
20. Check elevations shown in profile against those shown in plan view.
21. Check difference between T.C. and centerline against what typical section shows.
22. Use vertical curves for all grade breaks in excess of 0.6% (CU-D-5). Avoid non-symmetrical vertical curves.
23. Show true length and true grade of horizontal curves.
24. Show tangent grades for vertical curves, reverse or compound vertical curves.
25. Show P.I. elevations for vertical curves (CU-D-5).
26. Elevations every 50' (or fractional part thereof) on vertical curves.
27. On "grade to drain" situations, check for sufficient elevations and stations to allow grading to be done (critical where grading is to be done in flat areas).
28. Check through streets for drivability.
29. Show transitions between different curb heights and types.

30. If future curb is to go over channel, etc., check to see there will be adequate clearance between bottom of deck and top of channel.
31. Design speeds: residential streets 25 mph, secondary streets 35 mph, major streets 45 mph.
32. Show structures to scale (catch basins, etc.). Note critical flow line elevations (CU-D-5).
33. Show any existing or proposed underground facilities that may conflict or enter into the design and construction of the proposed improvements.
34. Show existing or proposed flows coming into or out of new improvements.
35. Show H.G.L. to nearest 0.1' in profile. Show "Q" in streets into catch basins and into storm drain system and designate Q10, Q50, etc. State any flow-by at catch basins.
36. Catch basin water surface elevations shall be 6" below gutter flow line.
37. For knuckle or street curve widening, the widened portion shall drain to the gutter flow line at a minimum slope of 2%.

D. DRAINAGE AND MISCELLANEOUS

1. Submit drainage calculations, including hydrology maps for pre- and post-developed conditions.
2. Check to see if new street section will carry same flow as the existing street section (critical where there is an existing ditch running along street) without diverting flow across centerline
3. $N=0.20$ on residential streets (with driveways, parked cars, etc.), $N=0.15$ on major streets (no driveways, little or no parking, etc.)
4. Check drainage structures for capacity. Minimum velocity at two feet per second for all underground drainage facilities. Hydraulic calculations submitted by Registered Engineer shall include catch basin sizing calculation(s).
5. Note size, length & "D" strength or gauge for drainage pipe. Any CMP shall be asphalt coated & lined.
6. Sump catch basins shall be designed for a 50-year storm, underground storm drain systems designed for a 10-year storm & open channel designed for 100-year storm events. Sump conditions require a secondary overland overflow to prevent flooding of property should catch basin or storm drain become blocked.
7. Carry 10-year storm between curbs and 100-year storm between right-of-way lines.
8. Grate catch basins will be bicycle proof.
9. No cross gutters where there are existing storm drains to tie into.
10. No under sidewalk drains where there are existing storm drains to tie into.
11. Is a letter required for the Department of Real Estate about any possible flooding of lots on tract?
12. Are any block walls, ditches, etc. needed along tract boundary to prevent flooding (overland, from ditches or large water carrying streets)?
13. Does proposed drainage system fit into City's master storm drain plan?
14. Check for need of cutoff walls, energy dissipators, etc. at the outlets & headwall or aprons at inlets.
15. Storm drain easements (12-foot minimum width) shall not be centered on property lines. Storm drains shall not be located on property lines.
16. Manholes are required at angle points in storm drains and located in convenient area for access.
17. If the irrigation line is not steel & it is to remain in service, it shall be encased in concrete if the line has less than 30" of groundcover. If a line is relocated, it will be replaced with steel irrigation pipe in any traffic areas. Abandoned lines are to be removed or crushed in place.
18. Show disposition for stand pipes or weir boxes. Note those that are to be removed or reconstructed. Show details of any re-construction.

M. SLOPE REQUIREMENTS FOR ROAD CONSTRUCTION (WHEN NO GRADING PLAN IS REQ'D)

1. When no grading plan is required, street improvement plans shall show existing contour lines on the plan view with sufficient width to show the entire limits of the grading. In addition, separate cross sections as developed in the design of the road(s) or as may be determined necessary by the Public Works Department shall be submitted. Cut and fill slopes shall conform to the 2019 California Building Code (CBC), Chapter 18, and Appendix J. When slope heights exceed 30 feet and are steeper than 3:1, the limits of grading, as a minimum, needs to include terraces and interceptor drains as specified in the CBC Appendix J.
2. The improvement plans may need to be accompanied by a soil engineering report and an engineering geology report in conformance with CBC chapter 18, with their recommendations incorporated and on "R" value. Also to be shown are details of terraces and area drainage with runoff served by each drain, watercourses, and rate of surface runoff for 10 year and 100 year storms (Q10, Q100). The quantities of grading and drainage structures shall be included on the Public Works Department Construction Cost Worksheet.
3. The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting and other measures. For further information, refer to the latest edition of the CBC, Chapter 18.
4. Slopes may be inspected by City inspectors and/or by City contracted inspectors. Professional inspections shall be provided, if required, by the civil engineer, soils engineer and the engineering geologist retained by the permittee.
5. Upon completion of work, final reports are required in conformance with CBC as well as notification of completion.
6. The National Pollutant Discharge Elimination System (NPDES) is a national program to control non-point source pollutants carried by storm water. The program is implemented and enforced by the State Water Resources Control Board (SWRCB). Flood Control conditions development projects and insures compliance with WQMP for projects connecting to, constructing or are a MDP facility all other projects will be reviewed by Public Works.
7. Notarized letters of permission are required for any grading on property that is beyond tract boundary. See the appendix for grading/drainage letter. Easements may be required in lieu of the above letters if directed by the Public Works Department. No permission is needed for work within existing accepted public dedications, unless private facilities will be altered, then owner notification will be required.

N. GRADING PLAN CHECK LIST

Project No. _____ Plan No. _____ Checked by: _____

Plan Check Deposit: _____ Receipt Number: _____ Date: _____

I. Title Sheet

1. Vicinity Map/North Arrow
2. General notes, list all improvement plans used as a reference in preparation of those plans in the general notes
3. Construction notes and Quantity Estimate
4. Index Map
5. Legend of symbols and abbreviations
6. City of Upland Bench Mark and basis of bearing
7. The name, address, and telephone number of developer/owner, civil engineer, and soils engineer
8. Project number and plan number in lower, right corner of plan
9. City approved title & signature block
10. Civil Engineer's seal & signature
11. Underground alert notice
12. Private Engineer's note
13. "Survey Monument" note and "Contractor's Responsibility for Safety" note
14. Estimated start and completion date
15. Design professional's statement
16. City Engineer's statement
17. Earthwork quantities
18. Description of property (address, APN, legal description)
19. Note: all grading shall be performed in accordance with the City of Upland's CU-E series Standard Drawings and ED-E of the Engineering Directives
20. All grading projects, regardless of size or time of year will require an Erosion Control Plan to prevent sediment from entering storm drain or water bodies; cross cut lot drainage not allowed
21. Review conditions of approval and complete all requirements
22. Check that all plan check fees have been paid prior to permit issuance
23. Submit WQMP
24. Provide WDID Number
25. Declaration of Engineer of Record
26. Comply with latest California Building Code (CBC)
27. Submit copy of approved tentative map and/or site plan
28. Submit copy of final map
- 29.
- 30.

II. Plan Sheet

1. North arrow/scale (minimum scale 1"=40')
2. Project boundary with dimensions
3. Lot lines and numbers with dimensions
4. All adjacent property lines
5. Existing contours and details of terrain. Extend existing contours at least 50' beyond the limits of the site
6. Plot location of all existing structures, buildings, walls, fences, trees, curb & gutters, driveways and sidewalks, etc. to within 30' of site
7. Plot and label all easements within the project site; easement must be on one lot only
8. Plot all underground facilities (existing & proposed)
9. Show pad and finish floor elevations of all existing and proposed buildings
10. Detailed plans of all surface and subsurface drainage devices
11. Show proposed drainage devices and swales; employ Low Impact Development (LID) and use BMPs

12. Show proposed curb, gutter, sidewalks, parking, planter areas, etc. Check that site matches approved site plan
13. Check all edge conditions for offsite grading and cross lot drainage. Request appropriate grading and drainage permission letters
14. 2:1 maximum slope allowed
15. Where needed, show stations and elevations along streets (stationing to conform to street stationing)
16. Construction notes
17. Details of non-standard drainage devices, etc.
18. Cross-section details where needed (especially along property lines)
19. Proposed contours
20. Dimension of street widths, existing utilities, proposed structures, buildings, parking lots, walls, drainage facilities, etc.
21. No drainage water allowed over public sidewalk in commercial sites. Give size and location of parkway drains
22. Onsite drainage over A.C. shall have a 1% minimum slope. Concrete gutters and V-ditches shall be a minimum of 6" thick, with a minimum slope (0.5% minimum)
23. All parkways to have a ¼" per foot slope
24. Show flowline grades for all drainage swales and devices
25. Show existing elevations at each lot corner
26. Retaining walls per separate permit must be submitted with grading plans. Only At-Risk grading permit will be issued until retaining walls are approved.
27. Change of grade along project property lines shall not exceed one foot without installation of retaining walls or slope letters (6" along existing fences)
28. Show sewer, water, fire, connections to proposed buildings
29. Give appropriate pavement section. Minimum 2" A.C. over native
30. Minimum grade for earth swale is 1%, check for erosion problems when slope exceeds 5% (CBC Section 1804)
31. The sides of common swales between houses shall be a minimum of 5% and maximum of 20% grade
32. Flowlines of swales for rear yard of residences shall be a minimum of 10 feet from the house (side yard has a 3' minimum). A minimum depth of 3" below pad is required at the H.P. of the swale
33. Check for 18" landings in all planters adjacent to parking stalls (CU-L-5)
34. Check that each new or upgraded multi-family development has one trash enclosure for every 8 housing units
35. A multi-family recycling program shall be required as follows: 80 sq. ft. of space shall be allocated for every 8 housing units and an additional 5 sq. ft. for each unit above the 8 units
36. Check that a minimum of one trash enclosure is proposed for all industrial/commercial sites
37. Check that all industrial/commercial sites provide 100-square feet for every 10,000-square feet of building space, with an additional 5-square feet for each 1,000-square feet above the 10,000-square feet for recycling activities
38. Check driveway slopes to ensure fire access and drivability
39. Check turning radii for fire truck accessibility (min. inside $r = 20'$, min. outside $r = 45'$)
40. False bottoms to be placed in all sewer manholes located within the construction area.
41. A trap is to be placed in the next downstream sewer manhole from the construction area to trap any construction debris from the site
42. A minimum 12 foot paved access is required to access all public facilities
43. Show grease interceptor, plumbed separately from the domestic waste pipe, when required.
44. Check the designated handicapped access route for pedestrian traffic through site (must meet ADA standards).

N. GRADING PLAN STATEMENTS

The following statements shall be placed on all grading plans:

Design Professional's Statement

This grading plan was prepared under my direction and is in accordance with California Building Code (latest edition) and Chapter 15.52 of the Upland Municipal Code. The site grading and all applicable details conform to the provisions of Series CU-E of the Standard Drawings of the City of Upland, with Series ED-E of the Engineering Directives, and with any City of Upland Conditions of Approval concerning grading. In my opinion, adequate provisions have been made for the drainage of surface waters from each building site.

Firm Name

Signature

Title

RCE#

Date

Statement of City Engineer

By my approval I hereby accept this grading plan and temporary erosion control plan as meeting the prerequisite for issuance of a grading permit and for record purposes. This grading plan and the temporary erosion control plan was prepared under the direction of a fully qualified professional who has stated that the plan conforms with all applicable requirements of the City. The design, elevations, details and features of the onsite grading have not been reviewed by the City, except as they relate to public improvements within adjacent right of ways and easements.

N. GRADING PLAN PROCESSING:

Work flow for the Ultimate Road Right-of-Way (URW) is as follows. This process applies to all grading permits and, dwelling accessory permits that are locating structures in the “Ultimate Road Right-of-Way” (URW).

- a. Applicant is sent to Land Use to start permit process.
- b. Land Use Tech checks GIS and parcel shows up next to a General Plan Road.
- c. Land Use Tech informs applicant that proposed construction is on a General Plan road.
- d. Applicant is sent to Public Works Department, no permit number started.
- e. Public Works makes applicant aware of options and set back requirements.
- f. If applicant chooses **to comply**. Public Works then places a “notice” on the parcel in LMS and indicates location of URW on site plan and signs off on plan.
- g. Land Use Tech checks for Public Works release on site plan, verifies set-backs and starts permit.
- h. If applicant chooses **not to comply**. Public Works then places a, “notice”, on the parcel in LMS and sends applicant back to Land Use with a letter indicating applicant’s choice not to comply.
- i. Land Use Tech takes letter, attaches it to the application and starts permit.

N. EROSION CONTROL PLAN CHECK LIST

Project No. _____ Plan No. _____ Checked by: _____

Plan Check Deposit: _____ Receipt Number: _____ Date: _____

I. Title Sheet

1. Vicinity Map/north arrow
2. General Erosion Control notes
3. Construction notes
4. Index map
5. Legend of symbols and abbreviations
6. Name/address/phone # of developer/owner, civil engineer, and soils engineer
7. Project number and plan number in lower, right corner of plan
8. City approved title/signature block (tract or parcel #, CUP, SP, etc.)
9. Civil engineer's seal and signature
10. Estimated start and completion date
11. "Design Professional's Statement" for Erosion Control
12. "City Engineer's Statement" for Erosion Control
13. Description of Property (address, APN, legal description)
14. Check that all plan check fees have been paid.
15. Provide 24-Hour contact person's name and number
16. Provide WDID Number

II. Plan Sheet

1. North arrow/scale (minimum scale 1"=40')
2. Project boundary with dimensions
3. Use Filter Fabric Gravel Bags
4. Temporary desilting details

N. GRADING

4.4

Erosion Control Details

P E N D I N G

N. GRADING

4.5

Erosion Control Plan Statements

The following statements shall be placed on all erosion control plans:

Design Professional's Statement Temporary Drainage and Erosion Control

This drainage and erosion control plan was prepared under my direction. Berms, swales, sandbags, and other temporary drainage facilities shown here are to be installed and maintained during the construction phase of the project. In my opinion, adequate provisions have been made to provide drainage of surface water from the site without causing flooding or sedimentation problems on public rights-of-way or surrounding private property.

Firm Name

Signature

Title RCE#

Date

N. GRADING CLEARANCE REQUESTS

There are few scenarios of the request and each varies from project to project, or from case to case. If not already done, a review and determination of the WQMP shall be made at this time.

Here are some of the scenarios and how Public Works handles each for (Rough Grading)

1. For any active project that is going thru the plan check process with Public Works, a request could be made by the design engineer/developer.

In this case the request should/would go directly to the Public Works plan check engineer who will look into it and allow or deny grading and if denied then with corrections. The plan checker should discuss with WQMP review staff to find out if it is being checked and what the status is.

2. For projects which have approved street plans but are not active.

- a. Grading plans without a PWC number come to Public Works from the applicant. Many of these involve grading request for one or two lots on an old parcel map.

In this case Public Works reviews the grading plans and compares them with what has previously been approved and makes sure that if any grading is done within the R/W is done per the approved plans and provides access to the lots and will work today and in the future if that road is designed and built.

- b. If the grading plan has a PWC number and was for a previously approved tract, then Public Works compares this new grading plan with the previously approved one before the clearance is issued.

3. For grading plans with a PWC number which Public Works receives and do not have an active case in plan check nor are improvements plans submitted yet for plan check, the engineer/developer would like to jump start the review; we typically deny grading. Improvement plans for a project which has approved conditions for street improvements must be submitted to Public Works for plan check; and after doing at least one complete and thorough plan check, the plan check engineer will clear and/or deny grading depending on the findings.

4. For grading plans with a PWC number which Public Works receives from an applicant and which they show some improvements within the road R/W, i.e. driveway construction, under sidewalk drains, adding a sidewalk or any improvements, we review the grading plan and if we find on file previously approved improvement plans, then we will require the engineer to check out our original mylars and revise them to show these proposed improvements before we clear the plan for grading, NOTE: For checking our original mylars to do the revision, see Section I part E in this handout on revising plans.

5. For Plot Plans, Public Use Cases and Conditional Use Cases.

- a. If they are active projects in plan check see case 1 above.

- b. If they have “IN EFFECT” conditions of approval for improvements but nothing has been submitted to Public Works for plan check and we receive grading plans with a PWC number, then we can review our file and compare the grading plan with the approved “Tentative” site plan on file and the conditions of approval are required prior to Building permit or prior to final inspection or occupancy then generally we allow on site grading, but no work is allowed in the road right-of-way.

Work within road right-of-way MUST have approved plans and developer MUST get an encroachment permit. NOTE: If no improvements are required but there is some work to be done within the road right-of-way such as driveways, drains, laterals etc... Then we will ask the engineer to revise our existing improvement plans if any are available; if no existing plans are available then we will ask the engineer to give us a mylar copy of this grading plan which is showing the new improvements on it, and we will approve and/or stamp this mylar to allow construction of these improvements within the R/W and the developer MUST show these approved plans to our Permit Section and obtain an encroachment permit to do this work.

- 6. If a Mass Grading plan has a PWC number, we will review and generally clear it, if all is OK. Coordination with the WQMP checker is required to get an update before issuing any clearance.
- 7. We do not review, check or approve Precise Grading as it only deals with grading on the lot. If it affects the right-of-way or causes additional work not covered by rough grading then a review by Public Works will be required.
- 8. For Fire Department Turn-Around, see Fire Department handout. <http://www.sbcfire.org>.

O. CASH IN-LIEU OF CONSTRUCTION PROCESSING

Cash-In-Lieu is a last resort process or determined at the tentative process. It is a way to satisfy the intent of the conditions while allowing the project to move forward.

1. The plan checker has to agree that the work on your project qualifies to deposit cash in lieu of construction.
2. The engineer prepares the cost estimate for future construction including future design, staking, inspection and administration to the satisfaction of the plan checker.
3. The plan checker approves the cost estimate. See appendix for estimate.
4. The Plan Check Supervisor processes the agreement already signed by the developer.
5. The agreement and check are processed beginning with the Public Works Department.
6. Standard notation is then inked on the mylar of the street plans and they can be signed. An amount of \$ (dollars) has been placed into account #101-5302-#### for the future construction of (facility type) located on (street name or location) which is not feasible to build at this time. Receipt Number dated .
7. On landscaping plans, show a note on the title sheet regarding the area of the future landscaping. "Future median landscape area = SF." This allows for calculation of future landscape maintenance money by the agency of jurisdiction.

V. DRAINAGE

CITY OF UPLAND STANDARD HYDROLOGY METHOD ¹

Peak Discharge by Rational Method for Urban Areas

1. For drainage subareas smaller than about 320 acres, or with lag times of less than 10 minutes, the time of concentration (" T_c ") at the collection point is estimated as being the initial overland flow time of 10 minutes plus the time of flow in gutters and conduits from the most remote part of the subarea to the collection point.
2. Determine whether project is located in Zone I or II from Figure 1.
3. Determine peak intensity " I " for a duration equal to " T_c " by using the proper intensity-duration curve from Figures 2 or 3.
A 10-year return period shall be assumed unless otherwise specified by the City Engineer.
4. From Figures 4 and 5, determine the proper hydrologic soil type.
5. Determine the runoff factor (" C ") from Figures 6 through 10.
6. The discharge rate at the collection point is determined by the formula $Q = CIA$.

¹ Moffatt & Nichol, Engineers, "San Bernardino County Storm Drain Master Plan Project No. 1, Hydrologic Design Criteria", Report prepared for San Bernardino County Flood Control District, April, 1955.

B. STORM DRAIN PLAN CHECKING PROCEDURES

For most developments Public Works will review the WQMP, drainage report and storm drain plans. If the project has a Flood facilities or condition requiring plan submittal and has facilities, Flood will maintain then they will review the drainage and WQMP for the project. If there is not a flood condition requiring plan submittal, Public Works will review and approve drainage report and storm drain plans.

When Flood Control is responsible for plan checking the drainage plans and calculations it includes all drainage facilities, including Flood Control non-maintained facilities.

The applicant is responsible to provide Public Works and Flood Control with street and storm drain plans. For projects with both Public Works and Flood Control facilities use Flood Control standard title block. For projects with Public Works facilities only, use the Public Works standard title block.

C. REPORT

A Drainage report is required for all developments in the City. It shall include a project description, project setting including discussion of existing and proposed conditions, any drainage issues related to the site, a summary of the findings or conclusions, offsite hydrology, onsite hydrology, hydraulic calculations and a hydrology map. Supporting materials must be included in the package, including all charts, tables, graphs and soil maps used to determine initial time of concentration, hydrologic values, and the like. Depending on the proposed facilities, the report may be reviewed and approved by Flood Control as well. If a bulking factor is required and is in dispute, a debris study will be required to justify the amount of bulking.

D. HYDROLOGY METHODS

For study areas less than 300 to 500 acres including offsite areas, use the Rational method. For larger areas and for routing drainage through detention or into retention basins, use the Synthetic Unit Hydrograph method. See San Bernardino County Flood Control Hydrology Manual for procedures and calculations.

E. HYDROLOGY CALCULATIONS

The San Bernardino County Flood Control Hydrology Manual has calculation worksheets that can be utilized for calculations. There are also a large variety of computer programs available for computing drainage runoff. The accepted programs are HEC-1 from the Hydraulic Engineering Center or authorized vendors, Rational or Synthetic Hydrograph from Advanced Engineering Software, or Rational, Synthetic Hydrograph, or Basin Routing from Civil Design. There may be others, please contact Flood Control Plan Check at (909) 387-7995 for verification. The analysis should include calculations of the existing and proposed conditions.

F. HYDRAULIC CALCULATIONS

All facilities that convey drainage must have calculations to support its use. The facilities include streets, culverts, storm drains, channels, catch basins, inlets, connector pipes, and others. Number and location of catch basins pipes and other drainage devices above the minimum requirement shall be at the discretion of the Public Works Department. When practical, intersections shall be designed to be dry.

All street section capacity calculations must be included using the Manning's equation. They should include depth, quantity, and velocity and can be hand or computer generated calculations. When streets are allowed to be used for drainage purposes, the 10-year frequency storm shall be contained below the tops of curbs (or dikes), and the 100-year frequency storm shall be contained within street right-of-way. If either of these criteria is exceeded, additional drainage facilities must be provided. Use 6" curb max on road types including secondary and 8" curb max on road types wider than secondary. Allowable velocity within the street section shall be determined by the product of depth of flow in feet times velocity in FPS and must be less than or equal to 6. Concrete Dip Crossings shall not be allowed unless approved by Public Works. If allowed, Q100 exceeds 250 cfs and one all-weather route is provided, and all else is satisfied per Ordinance, Concrete Dip Crossings may be allowed, with fire department approval. The maximum depth of water allowed over the roadway is 9 inches and the maximum velocity is 1.5 fps.

Culverts must include inlet or outlet control calculations per HEC-5, Hydraulic Design of Highway Culverts not just Manning's equation. Also provide structural calculations for the culvert if it falls within AASTO or Caltrans bridge criteria.

Storm drains require calculations of the hydraulic grade line that must be shown on the storm drain profile. This can be done using the worksheet in the Los Angeles City Flood Control Manual, Page G-1 or a computer program. Some of the accepted hydraulic programs are HEC-2 from the Hydraulic Engineering Center or authorized vendors, normal depth features of Hele from Advanced Engineering Software, or LA City WSPG, or Normal Depth Hydraulics from Civil Design. There may be others, please contact Flood Control Plan Check at (909) 387-7995 for verification. Also provide structural calculations for all pipes under the road way.

Open channels or open flow pipes can be sized with the Manning's equation. . In the Manning's Equation $Q = (1.485918/n)(A)(R^{2/3})(S^{1/2})$, [A=area, R=A/Pwet, S=CL Slope] the values of "n" shall be as follows: 0.013 for RCP; 0.014 for Cast In Place pipe; 0.014 for rectangular conc. channel; 0.015 for trapezoidal conc. channel; 0.015 for street sections; 0.020 for earth swales; 0.025 for CMP/CSP; 0.040 for grass.

Catch basins and inlets should be per Public Works Standards, not Flood Control, and sized per HEC-12, Drainage of Highway Pavements. Catch Basin sizing shall be calculated using the FHWA HEC 12 equations as follows: For on grade locations; $L_t = 0.6 \times Q^{0.42} \times s^{0.3} [1/(n \times S_x)]^{0.6}$ for total length required. If length is excessive, also use $E = 1 - (1 - L/L_t)^{1.8}$, acceptable efficiency is above 60%. For catch basins in a sump, use the weir equation if Q100 flow is below top of curb and the orifice equation for Q100 depths above top of curb. Grated catch basins are discouraged, but may be used on steep streets without debris. A minimum of 0.5 feet

of free board is required in the catch basins for the Q100 flows. Acceptable lengths include 4', 7', 10', 14', 21', not to exceed 28'. Use multiple catch basins if additional length is needed. Catch basins in series are not allowed unless approved by Public Works as an emergency overflow system; an emergency overflow route is required for some locations.

Connector pipes must be sized per LA City Hydraulic Manual section D. For on grade catch basins, the flow in the connector pipe is the flow intercepted by the catch basin in a 100-year event, not the Q100 in the street.

Any other facility being designed as part of the project must have support calculations. Note the reference and include tables, charts and other reference material if utilized.

G. HYDROLOGY MAP

All hydrology calculations must have a map. There may be multiple maps, one for existing and/or proposed development and for onsite and offsite areas.

- _____ 1. Hydrology maps shall be clear, legible (0.12" minimum text height), and to a scale large enough for their intended purpose, or they will not be accepted. USGS maps shall be avoided, but if used, shall be enlarged. SBCFC Topo maps shall be used if they exist for the project area.
- _____ 2. The preferred sheet size is 24" x 36". A different size may be used provided it folds into 8" x 10" and fits into a pocket in the back of the report.
- _____ 3. Show contours, proposed and existing slopes. Flown, Flood Control or other mapping may be used and should cover the onsite and offsite watershed.
- _____ 4. Label all nodes, node elevations, area names and acreages, and flow directions, flow path lengths, all to match drainage report.
- _____ 5. Show proposed and existing street layout include high points and sumps, lots and lot numbers, drainage facilities including catch basins, storm drains, culverts, ditches, basins, etc.
- _____ 6. A legend, north arrow and scale, project number (tract, plot plan, parcel map), "IP" number, date and engineer's stamp. The applicant may include a vicinity map and other identifying information at their option
- _____ 7. Show watershed boundary, sub area boundary, flow length, node elevations, flow path, areas, 10 year and 100 year flows at concentration or confluence points such as structures and project entrances and exits.
- _____ 8. Show basins and provide volumes, inflow and outlet flows for the 10 and 100 year events at each structure.

H. STORM DRAIN IMPROVEMENT PLAN CHECK LIST (PUBLIC & PRIVATE)

Project No. _____ Plan No. _____ Checked by: _____

Plan Check Deposit: _____ Receipt Number: _____ Date: _____

I. TITLE SHEET

1. Vicinity map with project location and north arrow
2. General notes (list all improvement plans used as a reference in preparation of those plans in the general notes)
3. Construction notes / quantity estimate
4. Index Map
5. Legend of symbols & abbreviations
6. City of Upland Benchmark and basis of bearing
7. Name / address / phone number of owner, developer, civil engineer and soils engineer
8. Project and plan number in lower right hand corner
9. City approved title/signature block (Tract or Parcel No., CUP, SP, etc.)
10. Civil Engineer's signature & seal on each sheet
11. Underground Service Alert notice
12. Private Engineer's note
13. "Survey Monument" note and "Contractor's Responsibility of Safety" note
14. Review conditions of approval and complete all requirements.
15. Check that all plan check fees have been paid prior to permit issuance.
16. Declaration of Engineer of record.

J. PLAN SHEET

1. Scale. Show horizontal scale near north arrow.
2. North arrow (pointing to the top or to the right of the sheet)
3. Necessary easements (width varies depending on depth and diameter)
4. Show existing improvements and dimensions with dashed lines, along with plan reference.
5. Show existing pipelines, irrigation lines, or structures, power poles, or trees, etc., in right-of-way and include note as to their disposition if encroaching. Show existing underground structures that may conflict with, or enter into, the design of proposed improvements.
6. Show improvements to be constructed with solid lines. Note connections to existing improvements.
7. Show improvement details if not City-standard.
8. Stationing to conform with established stationing on any previous plans. Stationing to be south to north or west to east.
9. Lateral should be 45° or less entering mains (90° O.K. for smaller diameter)
10. Centerline station for catch basin, show width, depth and velocity
11. Check historical drainage patterns.
12. Show stations at even 100' intervals
13. Construction notes
14. Lot lines, lot numbers and frontage dimensions
15. Cross check plan & profile stations and elevations
16. Curve data
17. Stations and lengths
18. Stations at EC and BC, and at beginning and end of improvements.
19. Utility crossings
20. Bearings of all street centerlines, intersecting streets, laterals and mains. Radial bearings on centerline of all catch basins, etc., on a curve. Use table of curve and lines
21. Street ROW widths
22. Check clearance of all parallel utilities
23. Check rip rap requirements

24. Check headwalls
25. Junction structure required for diameter greater than or equal to 36", if less than 36", full junction structure not required
26. Minimum cover 30" without special permission
27. Check street capacities
28. Check catch basin sizes
29. A minimum of 12' paved access shall be required to all public facilities. Access shall be clear of obstructions (including roof overhang)
30. Provide 4 inch bar scale

K. PROFILE

1. Scale, both horizontal and vertical.
2. Show datum elevations at both ends of sheet.
3. Existing ground shall be dashed line and labeled accordingly.
4. Profile of finish surface at centerline of storm drain. Existing surface for open channels.
5. Manhole rim elevations
6. Utility crossings with top or bottom of pipe elevations depending on location of crossing
7. For pipes, show size, length and "D" strength for each section.
8. Show HGL to the nearest 0.1' plotted and labeled accordingly.
9. Show connection with or future design to existing improvements, along with existing elevations. Show grade on existing improvements.
10. Check minimum grade on storm drain pipe (0.5% minimum preferred, may allow flatter slope under certain conditions)
11. Station / elevation at beginning and end of all structures
12. Show stationing at bottom of profile at heavy lines.
13. Hydraulic data - Q100, V for each pipe section
14. Station of centerline on manhole
15. Match lines with station, elevation and sheet reference
16. Names and stationing of intersecting streets
17. Maximum manhole spacing (varies depending on pipe size)
18. Collar required for change in slope greater than 10%.
19. Check plan stations with profile stations
20. Show structures to scale (catch basins, junction structures, etc.). Note critical flow line elevations.
21. Stationing of centerline on all streets
22. Profile all laterals.
23. Velocity greater than or equal to 20 fps, special cover pipe is required using f'c = 4,000 psi concrete
24. Maximum velocity is equal to 45 fps using f'c = 5,000 psi concrete
25. Maximum water surface in catch basin shall be 6" below inlet FL elevation.
26. No decrease in pipe size downstream without prior approval.
27. Vn/Vc should be less than .9 or greater than 1.2
28. Safety ledge required in manholes deeper than 20 feet.
29. Show flow line of local depression at catch basins.

L. MISCELLANEOUS – ENGINEERING DIRECTIVE ED-S-1

STREET DRAINAGE CRITERIA

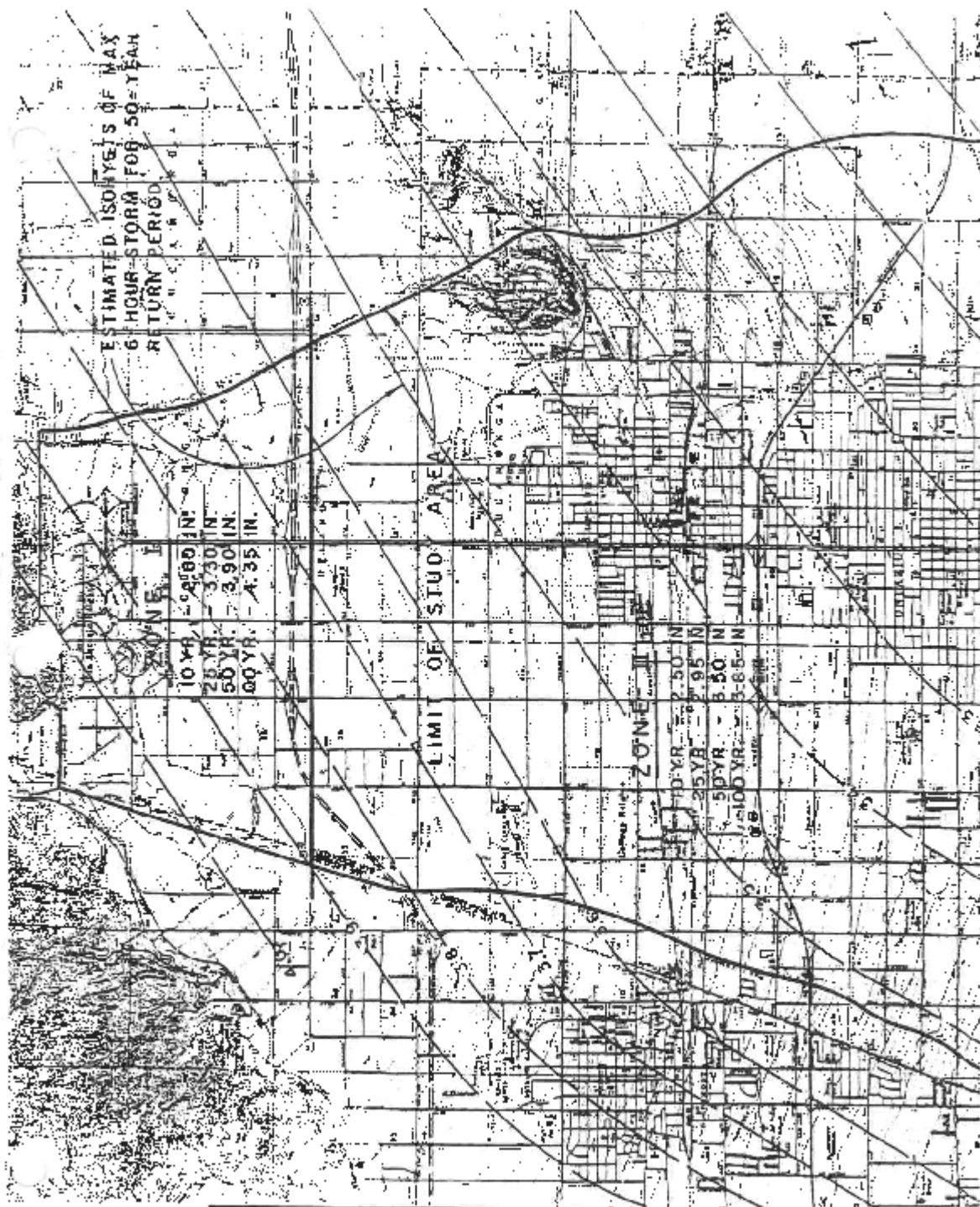
1. N/S streets: Q25 in curbs, Q100 in R.O.W.
2. E/W streets: Q50 in curbs, Q100 in R.O.W.
3. E/W streets with drainage areas greater than 80 acres & a slope less than 1% shall have a level street section.
4. For all arterial (and selected collector) streets, a minimum 10" curb face is required.

M. STORM DRAIN PIPE CRITERIA

1. Public drainage pipes shall be Reinforced Concrete Pipe (R.C.P.). HDPE pipe requires approval from the Public Works Director.
2. N/S street minimum pipe capacity shall equal Q10 from the tributary area. Combined street and pipe capacity shall contain Q25 in curbs and Q100 in R.O.W.
3. E/W street minimum pipe capacity shall equal Q25 from tributary area. Combined street and pipe capacity shall contain Q50 in curbs and Q100 in R.O.W.
4. Minimum pipe size is 15" diameter and 11" x 18" arc pipe
5. Curb inlet openings shall be 1½ times the area required by the storm drain incremental capacity. Exceptions may be granted for tributary areas greater than 200 acres.
6. If street grade is greater than 2%, angled or skewed, openings (not parallel) to the roadway are preferred.

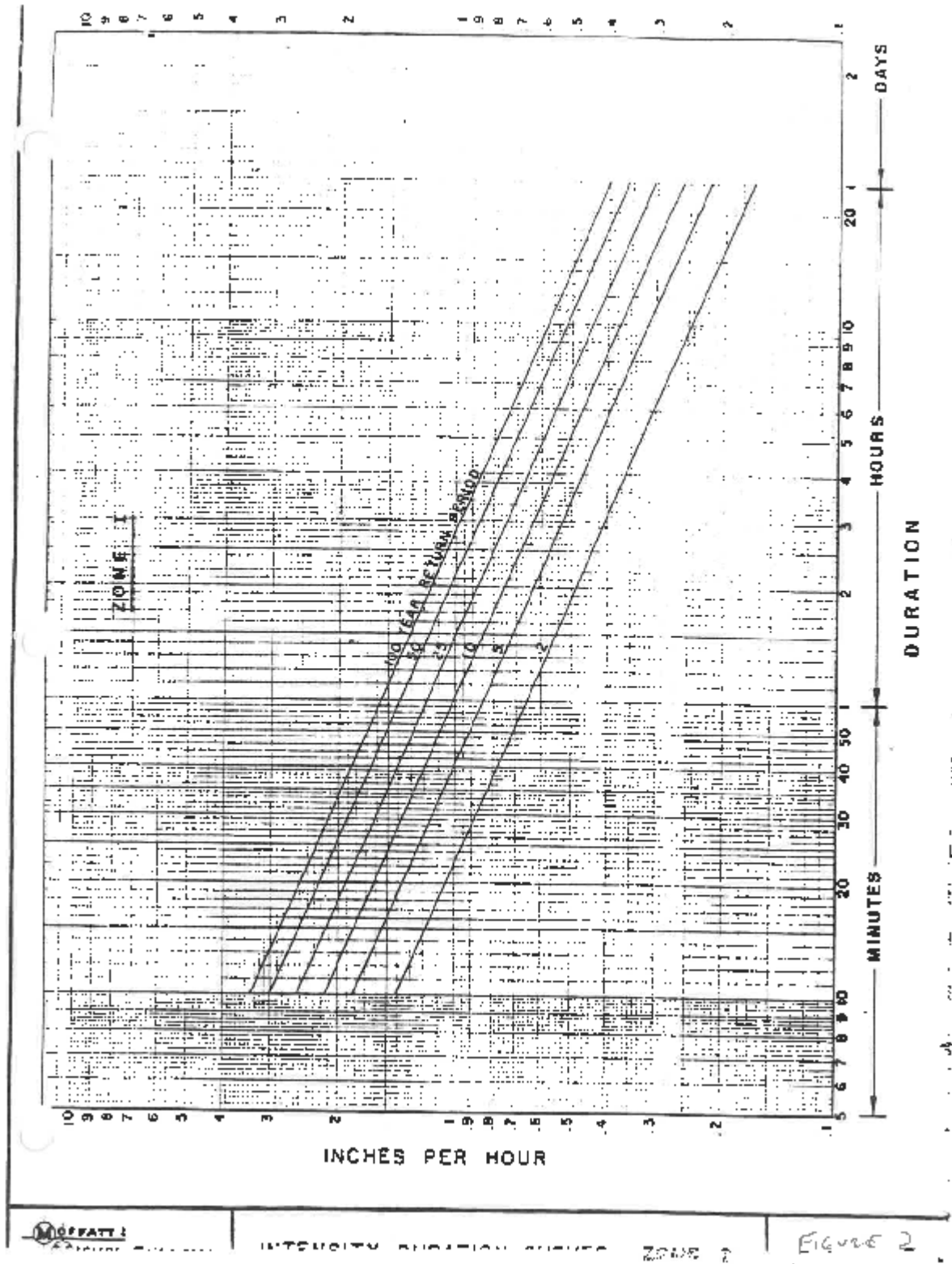
Sump Condition

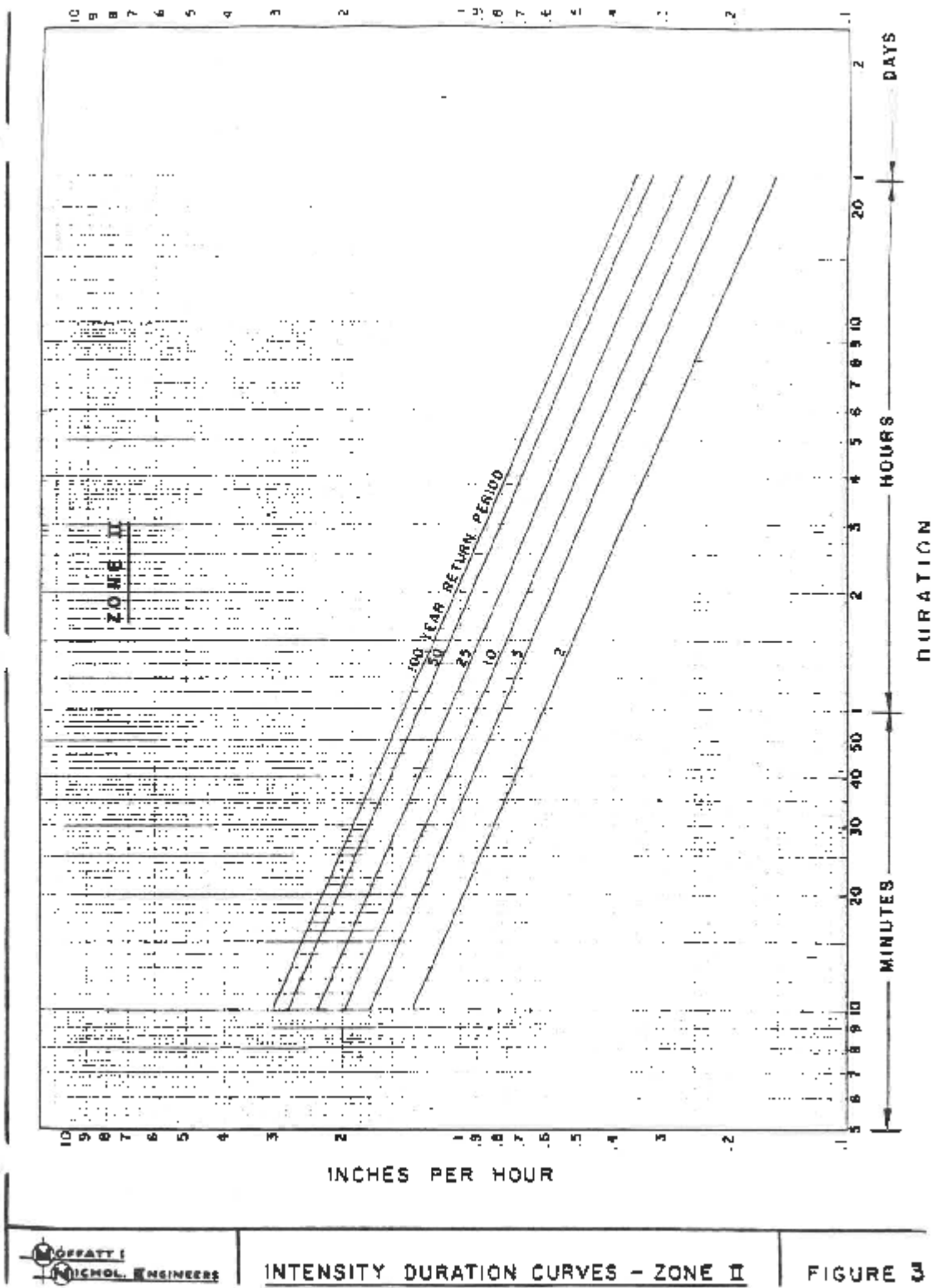
1. Minimum pipe capacity sized for Q25. Area of inlet opening shall be two times the area required for the Q25 capacity.
2. A Q100 overland flow conveyance is required. Pad elevations shall be one foot above Q100 high water mark.

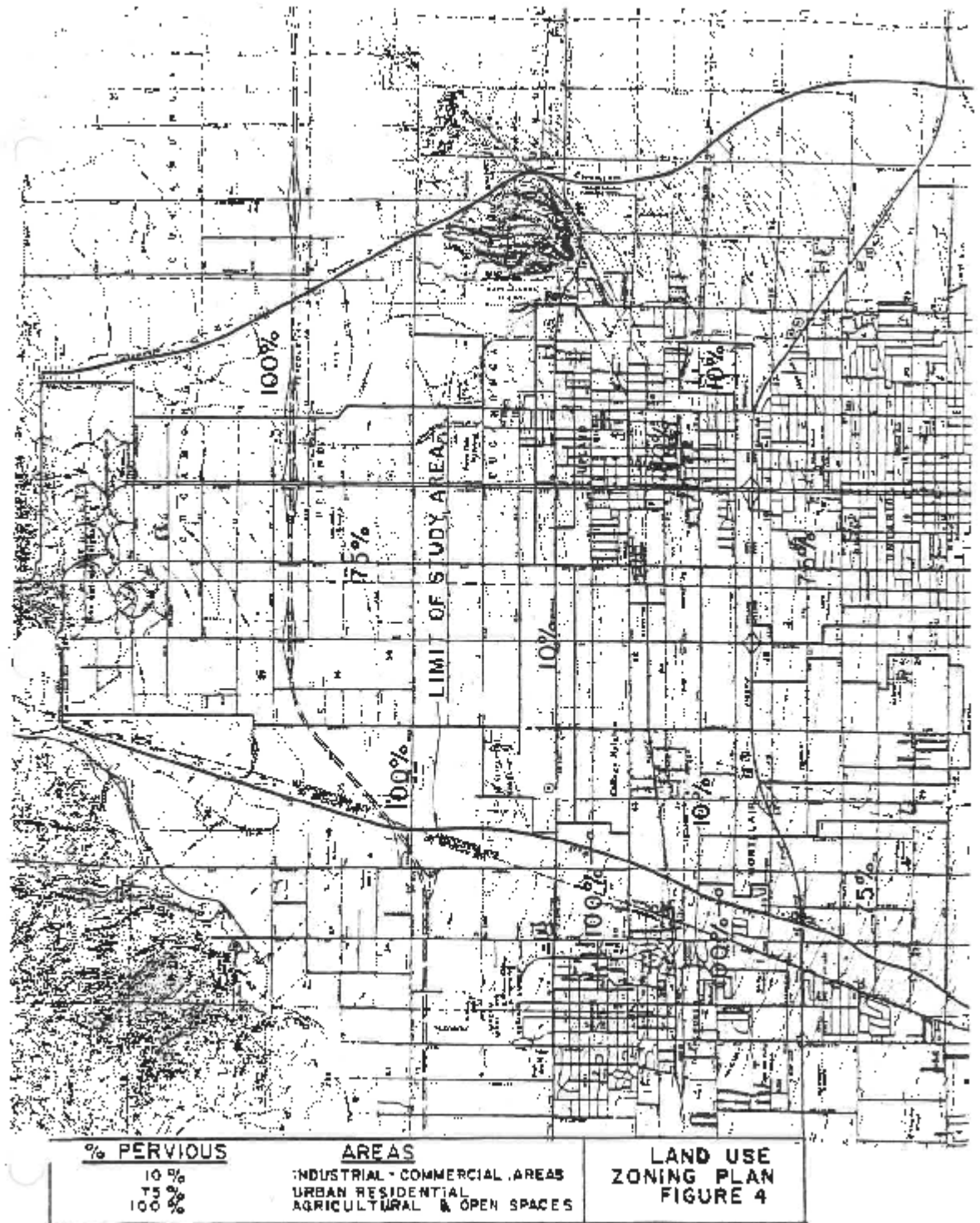


STUDY AREA 8 MAXIMUM 6-HOUR
RAINFALL AMOUNTS BY ZONE

FIGURE 1



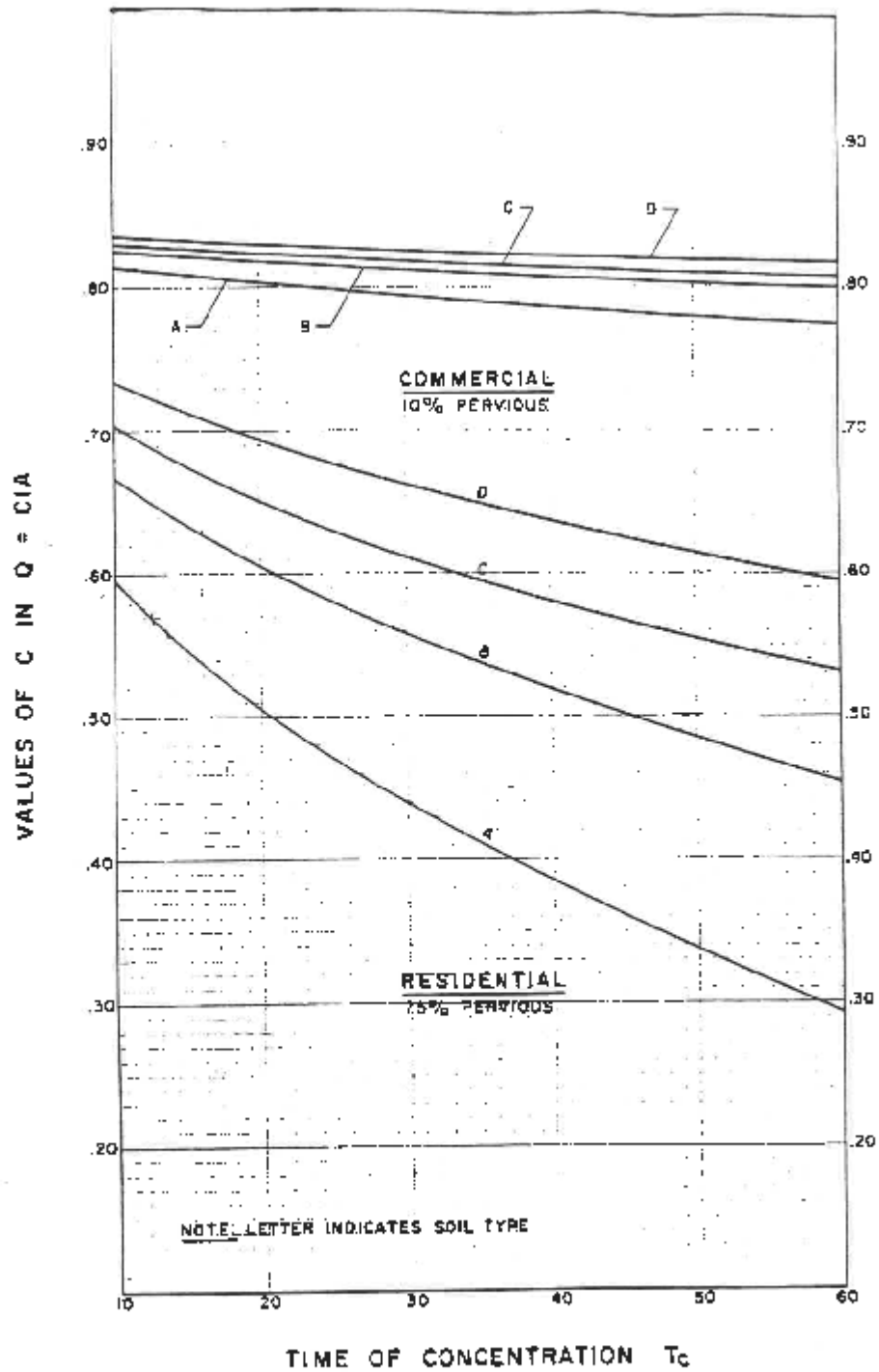


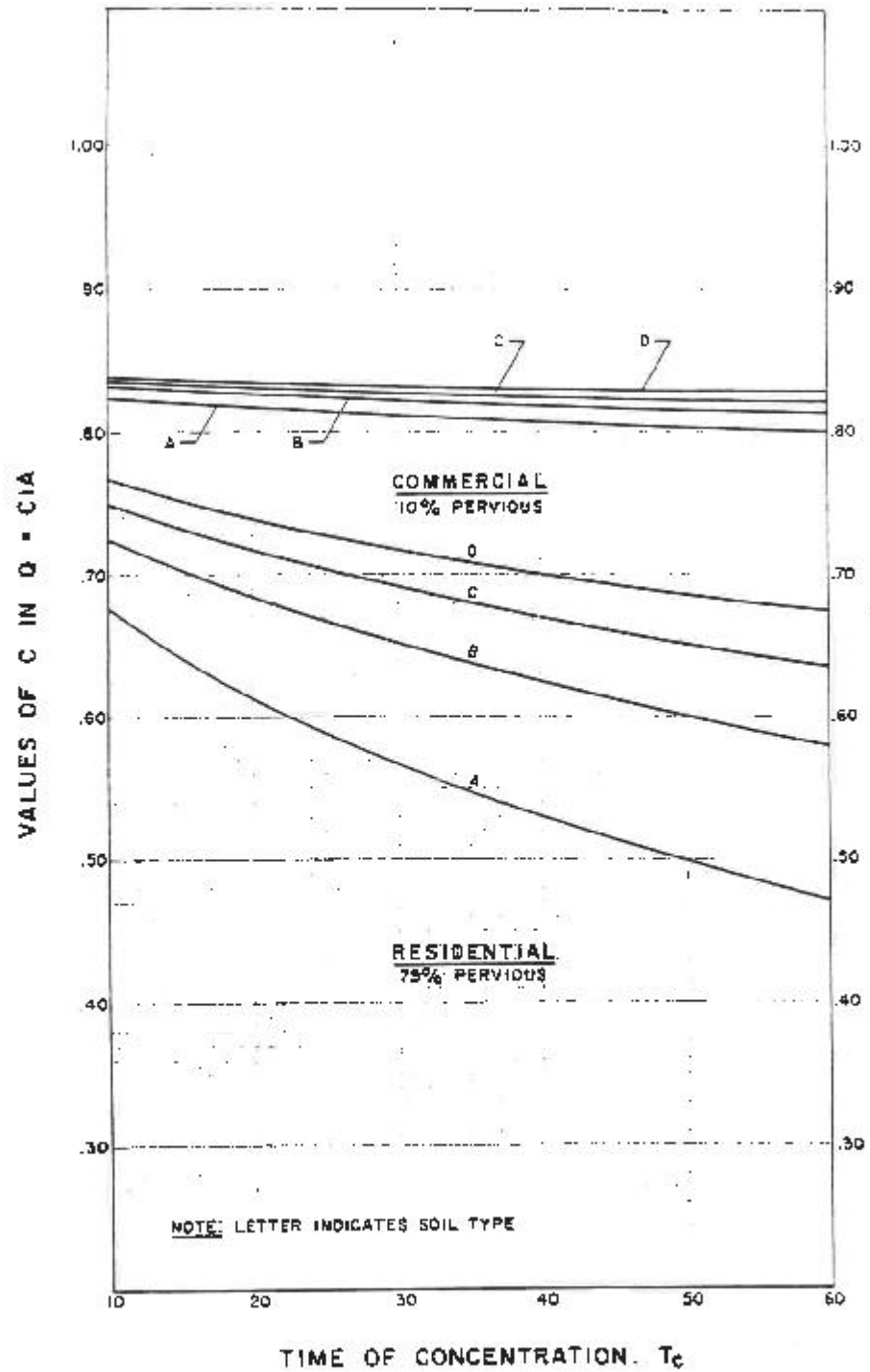


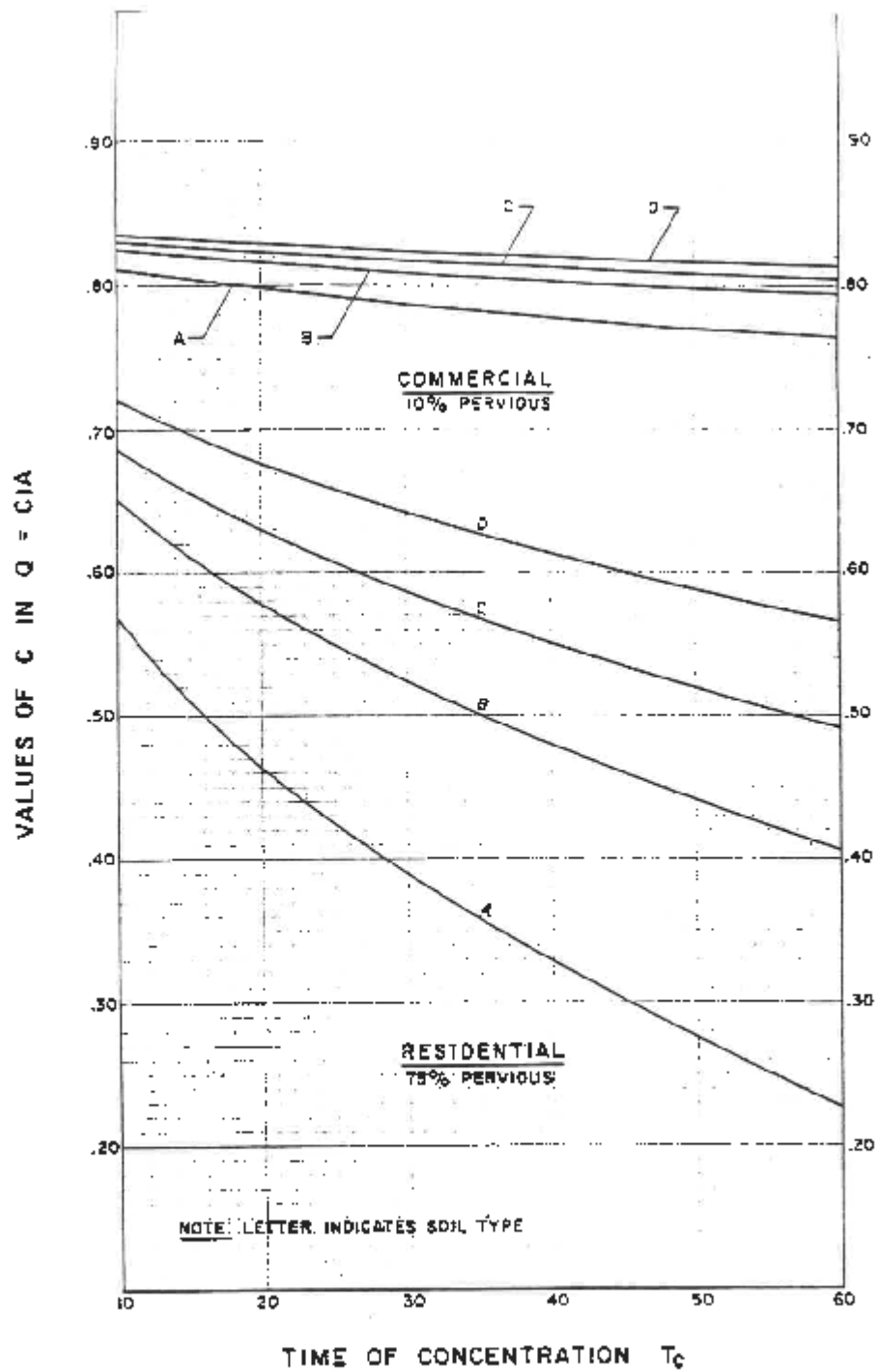


HYDROLOGIC SOIL GROUPS

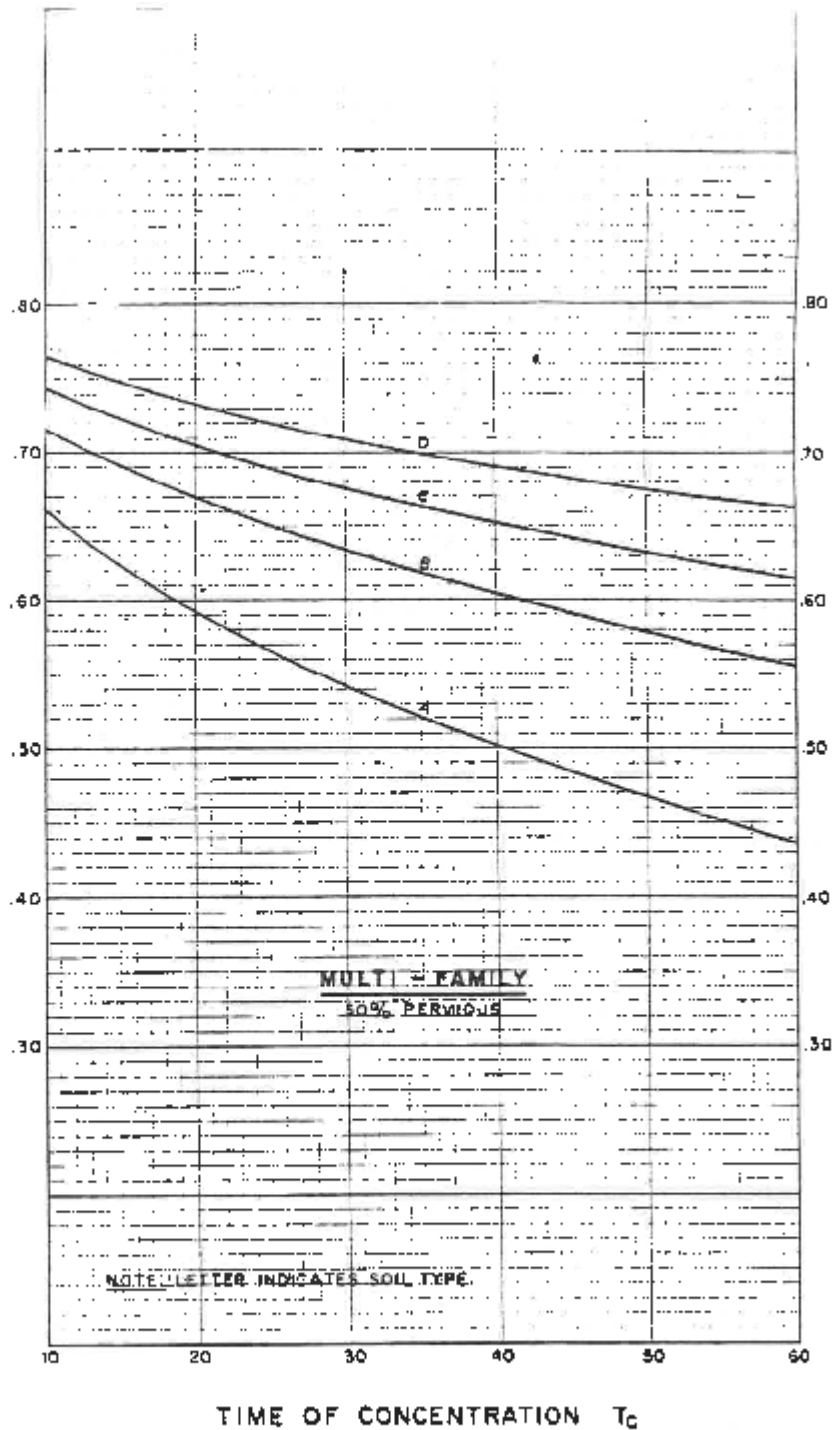
FIGURE 5







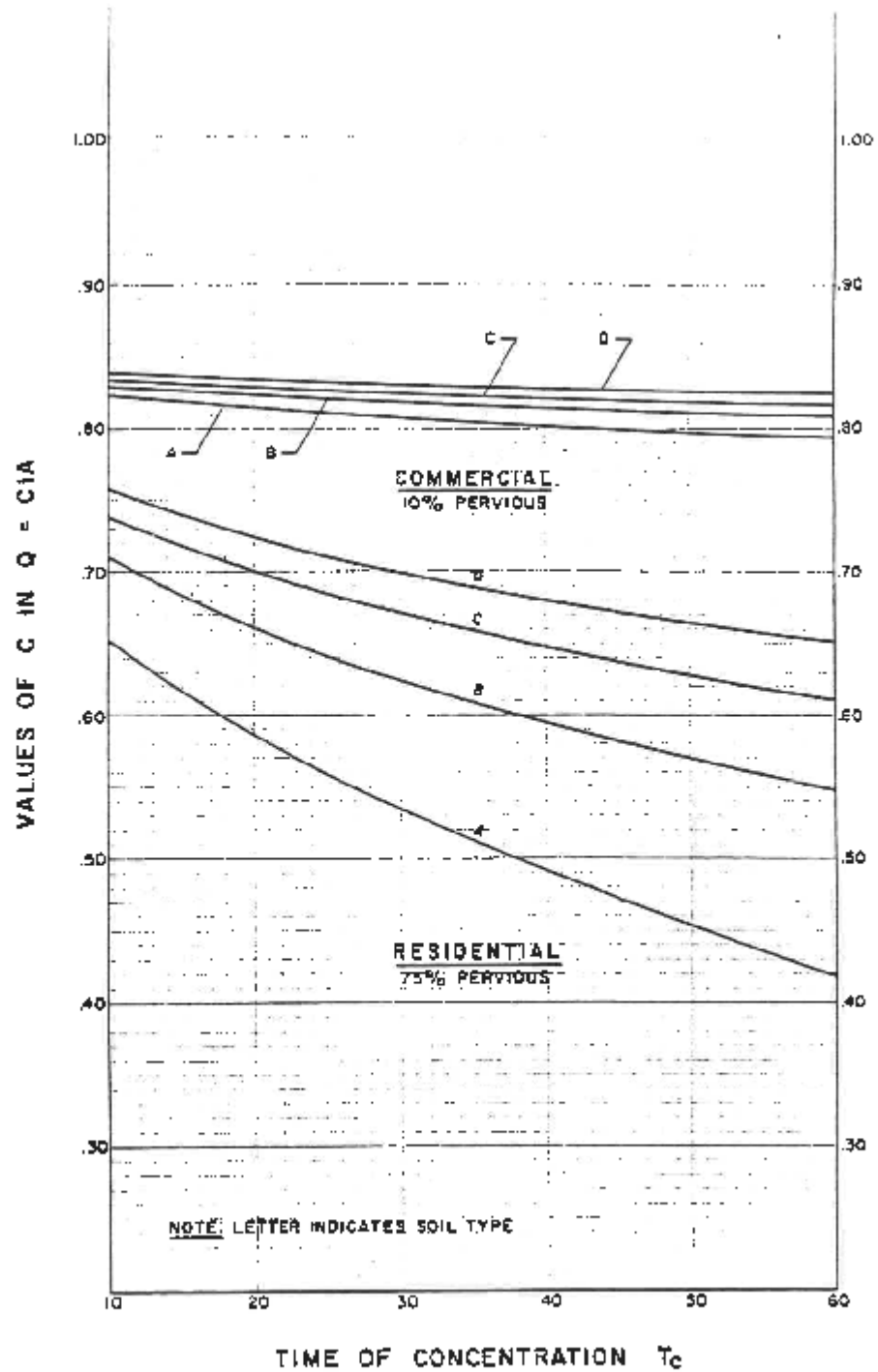
VALUES OF C IN $Q = CIA$

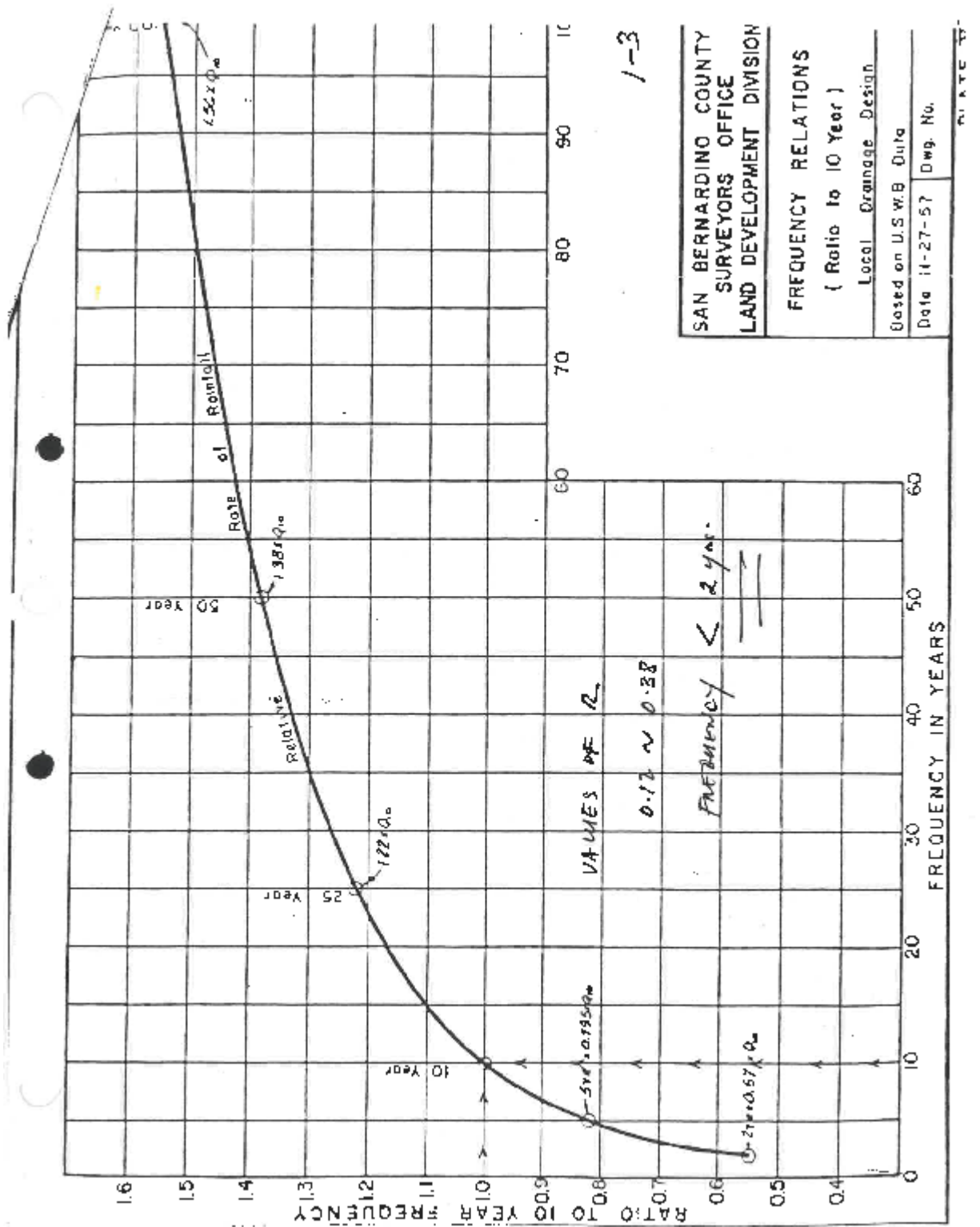


MOFFATT &
NICHOL ENGINEERS

RUNOFF COEFFICIENTS - RATIONAL METHOD

FIGURE 4





VI. GENERAL NOTES

A. NOTES FOR TITLE SHEET (TO BE PLACED ON THE TITLE SHEET OF ALL PLANS)

6.1 NOTES FOR TITLE SHEET (To be placed on the title sheet of all plans)

SURVEY MONUMENT NOTE

SURVEY MONUMENTS THAT EXIST AS SHOWN ON RECORDED MAPS, HIGHWAY MAPS, OR POINTS THAT PROVIDE SURVEY CONTROL WITHIN THE CONSTRUCTION AREA, SHALL BE LOCATED AND REFERENCED BY A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER (AUTHORIZED TO PRACTICE LAND SURVEYING). BEFORE THE START OF CONSTRUCTION, CORNER RECORDS SHALL BE FILED WITH THE COUNTY SURVEYOR. THESE CORNER RECORDS SHALL DESCRIBE THE MONUMENTS FOUND WITH TIE DISTANCES TO REFERENCE POINTS FOR THE RESETTING OF A SURVEY MONUMENT. WHEN CONSTRUCTION IS COMPLETED, MONUMENTS SHALL BE SET AND CORNER RECORDS SHALL BE FILED WITH THE COUNTY SURVEYOR SHOWING THE NEW MONUMENTS.

CONTRACTOR'S RESPONSIBILITY FOR SAFETY

IN SUBMITTING A BID FOR THIS WORK, THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, THE ENGINEER AND THE CITY OF UPLAND AND ITS AGENTS OR REPRESENTATIVES HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE ENGINEER, OR THE CITY OF UPLAND AND ITS AGENTS OR REPRESENTATIVES.

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT THE EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS" OF THE U.S. DEPARTMENT OF LABOR AND WITH "CONSTRUCTION SAFETY ORDERS." THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTOR OR SUBCONTRACTOR'S COMPLIANCE WITH SAID REGULATION AND ORDERS.

ENGINEERS NOTICE TO CONTRACTOR

THE EXISTENCE AND APPROXIMATE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES OR STRUCTURES EXCEPT AS SHOWN ON THESE PLANS. THE ENGINEER NEITHER ASSUMES ANY LIABILITY AS TO THE EXACT LOCATION OF SAID LINES NOR FOR UTILITIES OR IRRIGATION LINES WHOSE LOCATIONS ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY AND IRRIGATION COMPANIES PRIOR TO WORK ON EXCAVATION TO DETERMINE EXACT LOCATION OF ALL LINES AFFECTING THIS WORK, WHETHER OR NOT SHOWN HEREON, AND FOR ANY DAMAGE OR PROTECTION OF THESE LINES.

THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.), PHONE NUMBER 1-800-227-2600, TWO WORKING DAYS PRIOR TO DIGGING. NO CONSTRUCTION PERMIT, ISSUED BY

THE PUBLIC WORKS DEPARTMENT, SHALL BE VALID INVOLVING UNDERGROUND FACILITIES, UNLESS THE APPLICANT HAS AN INQUIRY IDENTIFICATION NUMBER ISSUED BY U.S.A.

NOTES FOR TITLE SHEET (Continued) To be placed on the title sheet of all plans)

DECLARATION OF ENGINEER OF RECORD NOTE

DECLARATION OF ENGINEER OF RECORD

I HEREBY DECLARE THAT IN MY PROFESSIONAL OPINION, THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH THE CURRENT PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ACCEPT FULL RESPONSIBILITY FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY THE CITY OF UPLAND IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THAT THESE PLANS COMPLY WITH CITY STANDARDS AND OTHER APPLICABLE CODES AND ORDINANCES. THE PLAN REVIEW PROCESS IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT THEREFORE RELIEVE ME OF MY DESIGN RESPONSIBILITY.

AS THE ENGINEER OF RECORD, I AGREE TO DEFEND AND INDEMNIFY THE CITY OF UPLAND, ITS OFFICERS, ITS AGENTS, AND ITS EMPLOYEES FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES, OR INJURIES TO ANY PERSON OR PROPERTY ARISING FROM NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF RECORD, HIS EMPLOYEES, HIS AGENTS OR HIS CONSULTANTS.

SIGNATURE: (REQUIRED AT MYLARS ONLY) DATE: _____

LICENSE NUMBER: _____

NOT FOR CONSTRUCTION NOTE:

PLEASE MARK ALL PLANS/ALL SHEETS EXCEPT MYLARS. NOT FOR CONSTRUCTION, FOR PLAN CHECK ONLY.

6.2 GENERAL NOTES FOR STREET IMPROVEMENT PLANS (PUBLIC & PRIVATE)

1. ALL WORK CALLED FOR ON THE PLANS SHALL COMPLY WITH CURRENT CITY OF UPLAND STANDARD SPECIFICATIONS, ADOPTED BY CITY COUNCIL, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIAL PROVISIONS FOR THIS PROJECT.
2. THE CONTRACTOR, BEFORE UNDERTAKING ANY GRADING OR CONSTRUCTION WORK OF ANY TYPE WITHIN THE PUBLIC RIGHT OF WAY MUST FIRST OBTAIN A CONSTRUCTION PERMIT FROM THE PUBLIC WORKS DEPARTMENT.
3. A TEMPORARY STREET CLOSURE PERMIT IS REQUIRED WHEN THE WORK IMPEDES VEHICULAR OR PEDESTRIAN TRAFFIC. PLEASE NOTE THAT CITY COUNCIL RESOLUTION NUMBER 1656, WHICH DEALS WITH THE PROMPT RESTORATION OF CITY STREETS DAMAGED DURING CONSTRUCTION, AND CHAPTER 12.08 OF THE UPLAND MUNICIPAL CODE WILL BE ENFORCED IN ALL CASES WHERE THE PROVISIONS ARE APPLICABLE.
4. INSPECTION BY THE CITY OF THE WORK CALLED FOR ON THE PLANS DOES NOT, IN ANY WAY, RELIEVE THE CONTRACTOR AND/OR DEVELOPER OF THEIR OBLIGATION TO PERFORM WORK IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS.
5. REQUESTS FOR DEVIATIONS FROM THE APPROVED PLANS, (EXCEPT MINOR ADJUSTMENTS IN THE FIELD TO MEET EXISTING CONDITIONS), SHALL BE MADE IN WRITING AND ARE NOT TO BE INITIATED UNLESS OR UNTIL THEY ARE APPROVED BY THE PUBLIC WORKS DIRECTOR OR A REPRESENTATIVE ACTING SPECIFICALLY UPON HIS INSTRUCTIONS.
6. ALL ELEVATIONS SHOWN ON THE PLANS ARE ESTABLISHED FROM CITY OF UPLAND BENCHMARKS.
7. QUANTITIES, AS SHOWN ON THE PLANS ARE ESTIMATED, AND THE CONTRACTOR IS ADVISED THAT FINAL QUANTITIES OF MATERIAL AND WORK IN PLACE MAY BE MORE OR LESS THAN THOSE INDICATED ON THE PLANS.
8. CONCRETE GUTTERS, ALLEY APPROACHES, DRIVEWAYS OR OTHER CONCRETE WORK THAT IS SUBJECT TO VEHICULAR TRAFFIC, SHALL BE BARRICADED AND NO VEHICULAR TRAFFIC IS PERMITTED THEREON FOR AT LEAST SEVEN DAYS FOLLOWING THE PLACEMENT OF THE CONCRETE WORK. WHEN THE GENERAL PROVISIONS CALL FOR CONCRETE WORK TO HAVE VEHICULAR TRAFFIC UPON IT SOONER THAN SEVEN DAYS AFTER PLACEMENT, OR WHEN THE CONTRACTOR FOR CONVENIENCE OF OPERATION SO DESIRES, THE CONCRETE WORK WILL CONTAIN AT LEAST EIGHT SACKS OF CEMENT PER CUBIC YARD, AND SHALL IF SO DIRECTED BY THE ENGINEER, BE USED, AND TRAFFIC WILL BE PERMITTED THEREON SEVENTY-TWO HOURS AFTER PLACING OF SAID EIGHT SACK CONCRETE.
9. IRRIGATION LINES WITHIN ANY CITY RIGHT-OF-WAY SHALL HAVE A TWENTY-FOUR INCH MINIMUM COVER FROM FINISH SURFACE; UNLESS SAID IRRIGATION LINE IS ENCASED IN CONCRETE OR BEDDED IN A SPECIAL CONCRETE CRADLE.
10. THE CONTRACTOR SHALL OPERATE IN A MANNER COMPLIANT WITH ALL APPLICABLE SECTIONS OF THE MUNICIPAL CODE AND COMPLIANT WITH ALL APPLICABLE CITY COUNCIL RESOLUTIONS.
11. THE LOCATION OF UNDERGROUND UTILITY OR IRRIGATION LINES AS SHOWN ON THE PLANS, IS APPROXIMATE, AND SINCE THE ACTUAL LOCATION MAY BE SOMEWHAT DIFFERENT FROM THAT SHOWN, THE CONTRACTOR IS REQUIRED TO CONTACT THE INTERESTED UTILITY OR WATER COMPANY BEFORE EXCAVATING IN THE VICINITY OF ANY SUCH LINES.

GENERAL NOTES FOR STREET IMPROVEMENTS (PUBLIC & PRIVATE) (CONTINUED)

12. PARKWAY TREES, INSTALLED BY THE DEVELOPER, SHALL BE PLANTED AND MAINTAINED IN ACCORDANCE WITH CITY OF UPLAND STANDARD DRAWING NUMBER CU-P-9 AND THE APPROVED STREET TREE LIST.
13. THE DEVELOPER, PER THE PUBLIC WORKS DEPARTMENT, WILL INSTALL ALL STREET NAME AND TRAFFIC REGULATORY SIGNS INDICATED IN THE PLANS. HIGH INTENSITY REFLECTIVE SHEETING WILL BE REQUIRED.
14. ALL STREET LIGHTS INDICATED ON THE PLANS SHALL BE INSTALLED BY THE SOUTHERN CALIFORNIA EDISON COMPANY. THE DEVELOPER SHALL WORK DIRECTLY WITH THE EDISON COMPANY WHEN THE LIGHTS ARE TO BE SERVED FROM ANY UNDERGROUND SYSTEM. WATER DEPARTMENT STANDARD W.26A AND W.26B DOES APPLY.
15. AN APPROVED WEED KILLER SHALL BE APPLIED TO THE PREPARED BASE PRIOR TO ASPHALT PAVING IN ALL AREAS WHERE THERE IS ANY EVIDENCE OF HUMUS OR ORGANIC MATERIAL PRESENT IN THE BASE (EITHER NATIVE OR IMPORTED) MATERIAL. ALL WEED KILLERS USED SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
16. THE FOLLOWING CITY OF UPLAND STANDARD DRAWINGS APPLY TO THIS PROJECT AND SHALL BE CONSIDERED AS PART OF THESE PLANS: CU-D-1, CU-D-2, CU-P-3, CU-P-4, CU-P-8, CU-R-2, CU-R-3, CU-S-1, CU-S-6, CU-Z-3, W.26A AND W.26B.
17. ALL PAVEMENT MARKING SHALL BE ALKYD THERMOPLASTIC
18. ALL TRAFFIC SIGNS SHALL BE CONSTRUCTED WITH HIGH INTENSITY REFLECTIVE SHEETING AND BE INSTALLED ON 2" SQUARE "QUICKPUNCH" POSTS WITH 8" CONCRETE FOOTING, 18" DEEP.
19. ALL WATER VALVES AND SEWER MANHOLES SHALL REMAIN ACCESSIBLE AND FREE OF DEBRIS THROUGHOUT ALL PHASES OF THE PROJECT.
20. INSTALL $\frac{3}{4}$ " PLYWOOD FALSE BOTTOMS IN ALL SEWER MANHOLES WITHIN THE CONSTRUCTION AREA (CHECKED DAILY BY INSPECTOR).
21. PROVIDE TRAP AT FIRST MANHOLE DOWNSTREAM OF PROPOSED IMPROVEMENTS (CHECKED DAILY BY INSPECTOR).
22. STREETS SHALL BE PAVED WITH 4" A.B. OVER 8" A.B. CLASS 2 OR TO THE RECOMMENDATION OF THE SOILS COMPACTION REPORT, WHICHEVER IS GREATER.
23. FOOTHILL BLVD SHALL BE PAVED WITH 8" A.C. OVER 8" A.B. CLASS 2 OR TO THE RECOMMENDATION OF THE SOILS COMPACTION REPORT, WHICHEVER IS GREATER.

6.3 GENERAL NOTES FOR WATER AND SEWER PLANS (PUBLIC & PRIVATE)

1. ALL WORK AND MATERIAL SHALL CONFORM TO THE HIGHER STANDARD IN EITHER "STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF WATER MAINS AND APPURTENANCES, APRIL 2011" ON FILE AT THE CITY WATER DEPARTMENT, CITY OF UPLAND, OR "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," LATEST ISSUE AND AMENDMENTS, KNOWN AS THE "GREEN BOOK."
2. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR LOCATING AND PROTECTING FROM DAMAGE ALL EXISTING FACILITIES AND IMPROVEMENTS WHETHER OR NOT SHOWN ON THESE PLANS. THE FACILITIES AND IMPROVEMENTS ARE BELIEVED TO BE CORRECTLY SHOWN BUT THE CONTRACTOR IS REQUIRED TO SATISFY HIMSELF AS TO THE COMPLETENESS AND ACCURACY OF THE LOCATIONS.
3. SAN ANTONIO WATER COMPANY, 139 N. EUCLID AVENUE, UPLAND, (909) 982-4107, MAY HAVE WATER LINES IN THIS AREA. CONTACT THEM FOR LOCATION, SIZE, AND DEPTH OF LINES, AND OTHER PERTINENT INFORMATION.
4. QUANTITIES SHOWN ON THE PLANS ARE ESTIMATED. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF QUANTITIES BEFORE BIDDING ON ANY ITEM.
5. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF INDUSTRIAL SAFETY, BEFORE STARTING THE EXCAVATION OF ANY TRENCH FIVE FEET OR MORE IN DEPTH. SHORING, BRACING, SLOPING AND ALL OTHER PROVISIONS FOR WORKER PROTECTION SHALL CONFORM TO THE PROVISIONS CONTAINED IN ARTICLE 6 OF THE STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS, EFFECTIVE AUGUST 8, 1965, AND AS AMENDED JULY 27, 1973. IF VARIATION FROM THESE STANDARDS IS DESIRED, A DETAILED PLAN SHALL BE PREPARED BY A REGISTERED CIVIL ENGINEER AND SUBMITTED TO THE PUBLIC WORKS DIRECTOR FOR APPROVAL.
6. ALL WATER AND SEWER MAINS SHALL MEET THE STATE OF CALIFORNIA, DEPARTMENT OF HEALTH REQUIREMENTS FOR THE SEPARATION BETWEEN WATER AND SANITARY SEWER.
7. THE CONTRACTOR IS REQUIRED TO REPAIR THE EXISTING PAVEMENT WHICH IS REMOVED OR DAMAGED BY HIS OPERATIONS IN ACCORDANCE WITH STANDARD DRAWING ORDINANCE NO. 1841 AND CU-Z-3 UNLESS ARRANGEMENTS ARE MADE WHICH COORDINATE STREET PAVING IN A MANNER ACCEPTABLE TO AND APPROVED BY THE PUBLIC WORKS DIRECTOR.
8. BEFORE CONNECTING TO THE CITY WATER SYSTEM, THE DEVELOPER MUST MEET THE REQUIREMENTS OF SECTION 13.12.130 OF THE UPLAND MUNICIPAL CODE RELATING TO THE TRANSFER OF WATER STOCK TO THE CITY OF UPLAND.
9. SERVICE LATERALS ARE TO BE PLACED AT THE CENTER THIRD OF THE LOT UNLESS OTHERWISE APPROVED BY THE CITY OF UPLAND.
10. SERVICE LATERALS ARE TO BE INSTALLED PER STANDARD DRAWING W.01 OR W.03, ON FILE AT THE CITY OF UPLAND.
11. FIRE HYDRANTS SHALL BE INSTALLED PER CITY STANDARD DRAWING W.05.
12. CONNECTIONS TO EXISTING WATER MAINS SHALL BE BY "HOT TAP."
13. MINIMUM COVER OF WATER LINES SHALL BE AS FOLLOWS:

**GENERAL NOTES FOR WATER AND SEWER PLANS (PUBLIC & PRIVATE)
(CONTINUED)**

DIAMETER OF PIPE	MINIMUM COVER
2"	24"
4"	30"
6"	36"
8"	42"
10"	48"
12"	48"
14"	52"

14. SADDLE CONNECTIONS ARE NOT PERMITTED TO THE SEWER MAIN. NEW CONNECTIONS REQUIRE A "TEE" OR "WYE" SECTION TO BE PLACED.
15. ACCESS TO WATER VALVES SHALL BE MAINTAINED DURING ALL PHASES OF THE PROJECT. VALVE BOXES TO REMAIN FREE AND CLEAR OF DEBRIS.
16. SEPARATION BETWEEN WATER INSTALLATIONS AND OTHER UTILITIES SHALL BE MAINTAINED (PER WATER DIVISION STD. W.25).
17. PROVIDE TRAP AT FIRST MANHOLE DOWNSTREAM OF PROPOSED IMPROVEMENTS. (CHECKED DAILY BY INSPECTOR)
18. PROVIDE $\frac{3}{4}$ " PLYWOOD FALSE BOTTOMS FOR MANHOLES, BOTH NEW AND OLD, DURING CONSTRUCTION. (CHECKED DAILY BY INSPECTOR)
19. PROVIDE CLEANOUTS FOR EACH SEWER LATERAL 6 INCHES BACK OF SIDEWALK, ADJUST TO FINISH GRADE IN BOX MARKED SEWER.
20. REFERENCE PLANS USED: LIST CITY DRAWING NUMBER'S

6.4 GENERAL NOTES FOR STORM DRAIN PLANS (PUBLIC & PRIVATE)

1. ALL WORK CALLED FOR ON THE PLANS SHALL BE IN COMPLIANCE WITH CURRENT CITY OF UPLAND STANDARD SPECIFICATIONS, ADOPTED BY CITY COUNCIL AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIAL PROVISIONS FOR THIS PROJECT.
2. THE CONTRACTOR SHALL OPERATE IN A MANNER COMPLIANT WITH ALL APPLICABLE SECTIONS OF THE UPLAND MUNICIPAL CODE AND CITY COUNCIL RESOLUTIONS.
3. THE CONTRACTOR, BEFORE UNDERTAKING ANY GRADING OR CONSTRUCTION WORK OF ANY TYPE WITHIN THE PUBLIC RIGHT OF WAY, MUST FIRST OBTAIN A CONSTRUCTION PERMIT FROM THE PUBLIC WORKS DEPARTMENT, LAND DEVELOPMENT & TRANSPORTATION DIVISION.
4. THE CONTRACTOR, BEFORE UNDERTAKING ANY GRADING OR CONSTRUCTION WORK OF ANY TYPE WITHIN THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY, MUST FIRST OBTAIN A CONSTRUCTION PERMIT FROM THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT.
5. A TEMPORARY STREET CLOSURE PERMIT FROM THE PUBLIC WORKS DEPARTMENT, TRANSPORTATION DIVISION, IS REQUIRED IN ALL CASES WHERE WORK WILL INTERFERE IN ANY WAY WITH VEHICULAR OR PEDESTRIAN TRAFFIC. THE CONTRACTOR IS ADVISED THAT CITY COUNCIL RESOLUTION NUMBER 1656, DEALING WITH PROMPT RESTORATION OF CITY STREETS AFFECTED BY CONSTRUCTION, AND CHAPTER 12.08 OF THE UPLAND MUNICIPAL CODE WILL BE ENFORCED IN ALL CASES WHERE THE PROVISIONS THEREOF ARE APPLICABLE.
6. HAUL ROUTES MUST USE CITY-APPROVED TRUCK ROUTES AS SHOWN ON THE CITY TRUCK ROUTE MAP. A SEPARATE PERMIT IS REQUIRED FROM THE CITY'S LAND DEVELOPMENT & TRANSPORTATION DIVISION.
7. INSPECTION BY THE CITY OF THE WORK CALLED FOR ON THE PLANS SHALL NOT RELIEVE THE CONTRACTOR AND/OR DEVELOPER IN ANY WAY, OF THEIR OBLIGATION TO PERFORM WORK IN COMPLIANCE WITH PLANS AND SPECIFICATIONS.
8. CONTRACTOR SHALL CONTACT THE CITY INSPECTOR, AND ALL OTHER PARTIES HAVING JURISDICTION REGARDING THE PROJECT, TO ARRANGE FOR A PRE-CONSTRUCTION MEETING A MINIMUM OF 2 WORKING DAYS PRIOR TO BEGINNING OF CONSTRUCTION.
9. ANY ALTERATIONS OR VARIANCES FROM THE PLANS, EXCEPT MINOR ADJUSTMENTS IN THE FIELD TO MEET EXISTING CONDITIONS, SHALL BE REQUESTED IN WRITING, AND MAY NOT BE INSTITUTED UNTIL APPROVED BY THE CITY ENGINEER, OR HIS REPRESENTATIVES, ACTION SPECIFICALLY UPON HIS INSTRUCTIONS.
10. ALL ELEVATIONS SHOWN ON THE PLANS SHALL BE ESTABLISHED FROM CITY OF UPLAND BENCHMARK.
11. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED CIVIL ENGINEER OR LAND SURVEYOR WHEN PROPOSED CONSTRUCTION REQUIRES DISTURBANCE OR REMOVAL OF CENTERLINE TIES OR OTHER SURVEY MONUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PAYMENT FOR THE SERVICES TO REESTABLISH REMOVED OR DESTROYED SURVEY MONUMENTS.

GENERAL NOTES FOR STORM DRAIN PLANS (PUBLIC & PRIVATE) (Continued)

12. QUANTITIES, AS SHOWN ON THE PLANS, ARE ESTIMATED, AND THE CONTRACTOR IS ADVISED THAT FINAL QUANTITIES OF MATERIAL AND WORK IN PLACE MAY BE GREATER OR LESS THAN THOSE INDICATED ON THE PLANS.
13. CONCRETE FACILITIES, WHICH WILL BE SUBJECT TO VEHICULAR TRAFFIC, SHALL BE BARRICADED AND NO VEHICULAR TRAFFIC SOONER THAN SEVEN DAYS AFTER PLACING WILL BE PERMITTED. WHEN THE CONTRACTOR FOR CONVENIENCE OF OPERATION SO DESIRES, CONCRETE CONTAINING EIGHT SACKS OF CEMENT PER CUBIC YARD MAY, AND SHALL, IF SO DIRECTED BY THE ENGINEER, BE USED. TRAFFIC WILL BE PERMITTED THEREON SEVENTY-TWO HOURS AFTER PLACING OF SAID EIGHT-SACK CONCRETE.
14. ALL CONSTRUCTION OPERATIONS SHALL BE IN CONFORMANCE WITH THE REGULATIONS SET FORTH BY CAL-OSHA.
15. CONTRACTOR SHALL SUBMIT A TRENCH SHORING PLAN TO THE CITY ENGINEER A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO ANY EXCAVATION FIVE FEET (5') OR GREATER IN DEPTH. IF THE PROPOSED TRENCH SHORING PLAN DEVIATES FROM THE STANDARDS SET FORTH BY THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA, CONTRACTOR SHALL HAVE A REGISTERED CIVIL ENGINEER, LICENSED IN THE STATE OF CALIFORNIA, CERTIFY THE ADEQUACY OF THE PROPOSED TRENCH SHORING SYSTEM. CONTRACTOR SHALL ALSO OBTAIN A PERMIT FROM THE STATE DIVISION OF INDUSTRIAL SAFETY IN ACCORDANCE WITH SECTION 7-10.4.1 SAFETY ORDERS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. A COPY OF THE PERMIT SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ANY EXCAVATION.
16. AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AT (800) 422-4133 TO REQUEST THE UTILITY OWNERS TO MARK OR OTHERWISE INDICATE THE LOCATION OF THEIR SUBSURFACE FACILITIES. CONTRACTOR SHALL PROVIDE THE CITY ENGINEER, OR HIS REPRESENTATIVE, WITH TICKET NUMBER ISSUED. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF ALL UTILITIES, INCLUDING ALL SERVICE CONNECTIONS, WHICH HAVE BEEN MARKED BY THE RESPECTIVE OWNERS AND WHICH MAY AFFECT OR BE AFFECTED BY THE CONTRACTOR'S OPERATIONS. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ALL UTILITIES AND STRUCTURES LOCATED IN THE PROJECT VICINITY.
17. PROTECT ALL UTILITIES, POLES, SIGNS, AND EXISTING IMPROVEMENTS IN PLACE UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR NOTED ON THE PLANS. WHERE RELOCATION OF THESE UTILITIES IS REQUIRED, THE CONTRACTOR SHALL COORDINATE CONSTRUCTION AS NECESSARY AND AS APPROVED.
18. WHERE CLEARANCE BETWEEN UTILITIES AND THE STORM DRAIN IS LIMITED AND CRITICAL, THE CONTRACTOR SHALL ASSURE HIMSELF BEFORE CONSTRUCTION (BY POTHOLING OR OTHER MEANS) THAT HE WILL BE ABLE TO COMPLETE THE STORM DRAIN INSTALLATION TO THE LINES AND GRADES AS SHOWN ON THE PLANS. IN NO CASE WILL THE STORM DRAIN PIPE BE ALLOWED TO BE CONSTRUCTED WITH AN ADVERSE INVERT SLOPE.

19. ALL STATIONING SHALL REFER TO CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTED. CATCH BASIN STATIONING SHALL BE BASED ON STREET CENTERLINE STATIONING, UNLESS OTHERWISE NOTED.
20. STATIONING FOR LATERALS AND CONNECTOR PIPES SHALL REFER TO THE CENTERLINE INTERSECTION OF THE PIPE AND IS BASED ON STORM DRAIN STATIONING.

GENERAL NOTES FOR STORM DRAIN PLANS (PUBLIC & PRIVATE) (Continued)

21. OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERT PIPES, OR SIMILAR STRUCTURES TO BE ABANDONED, SHALL BE SEALED WITH 6 INCHES OF CLASS "B" CONCRETE.
22. "V" IS THE DEPTH OF INLET OF CATCH BASINS MEASURED FROM THE TOP OF CURB TO INVERT OF THE OUTLET CONNECTOR PIPE.
23. CATCH BASINS SHALL BE LOCATED SUCH THAT THE LOCAL DEPRESSION SHALL BEGIN AT CURB RETURN JOINTS, UNLESS OTHERWISE NOTED ON PLANS.
24. THE MINIMUM CONCRETE COVER BETWEEN REINFORCEMENT SURFACE AND PIPE INSIDE SURFACE FOR TRANSVERSE STEEL SHALL BE 1 ½ INCHES. ASSUME 1 ½ INCHES TO CENTER OF BAR WHEN CALCULATING EFFECTIVE DEPTH. WHERE VELOCITIES ARE BETWEEN 20 TO 30 FT/SEC, THE CONCRETE COVER ON THE INSIDE FACE OF THE PIPE SHALL BE INCREASED ½ INCH. WHERE VELOCITIES EXCEED 30 FT/SEC, THE CLEARANCE ON THE INSIDE FACE SHALL BE INCREASED 1 INCH. DESIGN STRENGTH IN THESE REACHES SHALL BE $F_c=4,000$ PSI FOR VELOCITIES EXCEEDING 20 FT/SEC.
25. THROUGHOUT ALL PHASES OF CONSTRUCTION, THE CONTRACTOR SHALL KEEP THE WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS UNTIL FINAL ACCEPTANCE BY THE CITY COUNCIL. THE CONTRACTOR SHALL ALSO ABATE NUISANCE DUST BY CLEARING, SWEEPING, SPRINKLING WITH WATER, AND OTHER APPLICABLE DUST CONTROL MEASURES AS DIRECTED BY THE CITY THROUGHOUT THE CONSTRUCTION OPERATION.
26. AN APPROVED WEED KILLER SHALL BE APPLIED TO THE PREPARED BASE PRIOR TO ASPHALT PAVING IN ALL AREAS WHERE THERE IS ANY EVIDENCE OF HUMUS OR ORGANIC MATERIAL PRESENT IN THE BASE (EITHER NATIVE OR IMPORTED) MATERIAL. ALL WEED KILLERS USED SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS AND INSTRUCTIONS.
27. SAWCUTS TO EXISTING PAVEMENTS SHALL BE CLEAN, STRAIGHT EDGES AS DIRECTED BY THE CITY INSPECTOR.
28. ALL UNSUITABLE MATERIAL SHALL BE REMOVED, AS REQUIRED BY THE CITY ENGINEER, SOILS ENGINEER OR ENGINEERING GEOLOGIST, FROM ALL AREAS TO RECEIVE COMPACTED FILL OR DRAINAGE STRUCTURES, AND SHALL BE HAULED TO A DUMP SITE APPROVED BY THE CITY ENGINEER.
29. ALL TREE ROOTS, ABANDONED IRRIGATION PIPELINES, UTILITY SERVICES, SEPTIC TANKS, AND SIMILAR MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION SITE, AND VOIDS CREATED THEREBY SHALL BE PROPERLY FILLED AND COMPACTED AS DIRECTED BY THE CITY ENGINEER, SOILS ENGINEER OR ENGINEERING GEOLOGIST.

30. ALL MANHOLE RIMS, WATER VALVE CANS, GAS VALVE, ETC. SHALL BE ADJUSTED TO FINISH GRADE BY THE CONTRACTOR AS PART OF THIS PROJECT.
31. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS TO PUBLIC STREET, INCLUDING BUT NOT LIMITED TO HAUL ROUTES, ALLEYS, SIDEWALKS, CURBS AND GUTTERS, CROSS GUTTERS, OR TO PRIVATE PROPERTY, SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE CITY ENGINEER.
32. THE FOLLOWING CITY OF UPLAND STANDARD DRAWINGS APPLY TO THIS PROJECT, AND SHALL BE CONSIDERED PART OF THESE PLANS: CU-D-1, CU-D-2, CU-D-3, CU-P-4, CU-R-3, CU-S-1, CU-S-6, CU-Z-3, W.26A AND W.26B.

GENERAL NOTES FOR STORM DRAIN PLANS (PUBLIC & PRIVATE) (Continued)

33. INSTALL ¾ INCH PLYWOOD FALSE BOTTOMS IN ALL SEWER MANHOLES WITHIN THE CONSTRUCTION AREA (INSPECTOR TO CHECK DAILY).
34. CONTRACTOR SHALL INSTALL A TRAP AT THE FIRST SEWER MANHOLE DOWNSTREAM OF CONSTRUCTION AREA (INSPECTOR TO CHECK DAILY).
35. THE DEVELOPER SHALL BE RESPONSIBLE FOR SUBMITTING TO THE CITY, PROOF THAT A NOTICE OF INTENT (NOI) FOR THE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAS BEEN FILED WITH AND APPROVED BY THE STATE WATER RESOURCES CONTROL BOARD. THE DEVELOPER SHALL SUBMIT A COPY OF THE WDID NUMBER OBTAINED FROM THE STATE WATER RESOURCE CONTROL BOARD TO THE CITY ENGINEER. CONSTRUCTION SHALL NOT COMMENCE WITHOUT THIS APPROVAL. THE DEVELOPER SHALL BE RESPONSIBLE TO COMPLY WITH THE GENERAL CONSTRUCTION ACTIVITY STORM WATER PERMIT BY IMPLEMENTING THEIR STORM WATER POLLUTION PREVENTION PLAN FOR THE DURATION OF THE PROJECT. THE SWPPP SHALL IDENTIFY POTENTIAL POLLUTANT SOURCES THAT MAY AFFECT THE QUALITY OF DISCHARGES TO THE STORM DRAIN SYSTEM AND SHALL INCLUDE THE DESIGN AND PLACEMENT OF RECOMMENDED BEST MANAGEMENT PRACTICES (BMP'S) TO EFFECTIVELY PROHIBIT THE ENTRY OF POLLUTANTS FROM THE CONSTRUCTION SITE INTO THE STORM DRAIN SYSTEM DURING CONSTRUCTION. THE APPLICANT/OWNER IS RESPONSIBLE FOR ENSURING THAT THE PROJECT CONTRACTORS AND SUBCONTRACTORS IMPLEMENT ALL APPLICABLE BMP'S.
36. ALL CATCH BASIN AND STORM DRAIN INLET FACILITIES SHALL BE STENCILED WITH THE APPROPRIATE "NO DUMPING" MESSAGE AS SUPPLIED BY THE PUBLIC WORKS DEPARTMENT, ENVIRONMENTAL DIVISION.
37. THE DEVELOPER'S ENGINEER SHALL KEEP A RECORD OF ALL CHANGES DURING CONSTRUCTION AND SHALL SUBMIT SUCH RECORDS TO THE CITY ENGINEER BEFORE A RELEASE OF OCCUPANCY WILL BE ISSUED.
38. IN THE EVENT THE DEVELOPER FAILS TO COMPLY WITH THE PROVISIONS OF THE PERMIT AND APPLICABLE LAWS. THE SURETY WILL PROMPTLY COMPLETE THE WORKS TO THE SATISFACTION OF THE PUBLIC WORKS DIRECTOR. IN THE EVENT SAID SURETY FAILS TO PROMPTLY COMPLETE THE WORK AS APPROVED ON THE PLANS, THE SURETY SHALL PAY THE CITY ALL COST AND EXPENSES INCURRED BY THE CITY IN MAKING THE PREMISES SAFE AND COMPLETING THE PROJECT TO THE SATISFACTION OF THE CITY ENGINEER.

6.5 GENERAL NOTES FOR GRADING PLANS

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 15.52 OF THE UPLAND MUNICIPAL CODE AND ANY SPECIAL REQUIREMENTS OF THE PERMIT. A COPY OF THE APPROVED GRADING PLAN SHALL BE RETAINED ON THE JOB SITE WHILE WORK IS IN PROGRESS. WHEN REFERENCED ON THE PLANS, A COPY OF CITY OF UPLAND STANDARD PLANS SHALL ALSO BE RETAINED ON THE SITE.
2. GRADING SHALL NOT BE STARTED WITHOUT FIRST NOTIFYING THE CITY OF UPLAND PUBLIC WORKS INSPECTOR AT (909) 291-2963. A PRE-GRADING MEETING ON THE SITE IS REQUIRED BEFORE START OF GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, ENGINEERING GEOLOGIST, AND CITY INSPECTOR. THE REQUIRED INSPECTIONS FOR GRADING WILL BE EXPLAINED AT THIS MEETING.
3. ISSUANCE OF A GRADING PERMIT DOES NOT ELIMINATE THE NEED FOR PERMITS FROM OTHER AGENCIES WITH REGULATORY RESPONSIBILITIES FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WORK AUTHORIZED ON THIS PLAN.
4. THE GRADING PERMIT AND AN APPROVED COPY OF THE GRADING PLAN SHALL BE ON THE PERMITTED SITE WHILE WORK IS IN PROGRESS.
5. PRELIMINARY SOIL AND GEOLOGY REPORTS AND ALL SUBSEQUENT REPORTS ARE CONSIDERED A PART OF THE APPROVED GRADING PLAN.
6. THE SOILS ENGINEER AND ENGINEERING GEOLOGIST SHALL PERFORM SUFFICIENT INSPECTIONS AND BE AVAILABLE DURING GRADING AND CONSTRUCTION TO VERIFY COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND THE CODE WITHIN THEIR PURVIEW.
7. THE CIVIL ENGINEER SHALL BE AVAILABLE DURING GRADING TO VERIFY COMPLIANCE WITH THE PLANS, SPECIFICATIONS, CODE AND ANY SPECIAL CONDITIONS OF THE PERMIT WITHIN THEIR PURVIEW.
8. AREAS TO RECEIVE FILL SHALL BE PROPERLY PREPARED AND APPROVED IN WRITING BY THE SOILS ENGINEER BEFORE PLACING FILL.
9. FILLS SHALL BE BENCHED INTO COMPETENT MATERIAL AS REQUIRED BY THE SOILS ENGINEER.
10. ALL EXISTING FILLS SHALL BE APPROVED BY THE SOILS ENGINEER OR REMOVED BEFORE PLACING ADDITIONAL FILLS.
11. FILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM OF 90% RELATIVE COMPACTION. AGGREGATE BASE FOR ASPHALTIC AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. MAXIMUM DENSITY SHALL BE IN ACCORDANCE WITH CALIFORNIA BUILDING CODE (LATEST EDITION).
12. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 2-FOOT HORIZONTAL TO 1-FOOT VERTICAL (2:1) EXCEPT WHERE SPECIFICALLY APPROVED OTHERWISE.
13. ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY THE ENGINEERING GEOLOGIST TO DETERMINE IF ANY SLOPE STABILITY PROBLEM EXISTS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL SUBMIT RECOMMENDED TREATMENT TO THE CITY INSPECTOR FOR APPROVAL.

GENERAL NOTES FOR GRADING PLANS (CONTINUED)

14. ALL TRENCH BACKFILLS SHALL BE TESTED AND APPROVED BY THE SOILS ENGINEER PER THE GRADING CODE.
15. ANY EXISTING IRRIGATION LINES AND CISTERNS SHALL BE REMOVED OR CRUSHED IN PLACE AND APPROVED BY THE CITY INSPECTOR AND SOILS ENGINEER.
16. ANY EXISTING WATER WELLS SHALL BE ABANDONED IN COMPLIANCE WITH THE SPECIFICATIONS APPROVED BY San Bernardino COUNTY DEPARTMENT OF PUBLIC HEALTH.
17. ANY EXISTING CESSPOOLS AND SEPTIC TANKS SHALL BE ABANDONED IN COMPLIANCE WITH THE CALIFORNIA PLUMBING CODE TO THE APPROVAL OF THE BUILDING OFFICIAL. A SEPARATE PERMIT MUST BE OBTAINED FROM THE CITY BUILDING DEPARTMENT.
18. THE CITY INSPECTOR, BEFORE EXCAVATION, SHALL APPROVE STOCKPILING OF EXCESS MATERIAL.
19. EXPORT SOIL MUST BE TRANSPORTED TO A LEGAL DUMP OR TO A PERMITTED SITE APPROVED BY THE CITY INSPECTOR.
20. THE PERMITTEE SHALL SUBMIT A HAUL ROUTE PLAN TO THE CITY ENGINEER WHEN EARTH AND/OR DEBRIS IS TRANSPORTED TO OR FROM A PERMITTED SITE ON PUBLIC ROADWAYS.
21. THE PERMITTEE IS RESPONSIBLE FOR DUST CONTROL MEASURES.
22. THE PERMITTEE SHALL GIVE REASONABLE NOTICE TO THE OWNER OF THE ADJOINING LANDS AND BUILDINGS BEFORE BEGINNING EXCAVATIONS, WHICH MAY AFFECT THE LATERAL AND SUBJACENT SUPPORT OF THE ADJOINING PROPERTY. THE NOTICE SHALL STATE THE INTENDED DEPTH OF EXCAVATION AND WHEN THE EXCAVATION WILL COMMENCE. THE PERMITTEE OR HIS AGENT SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY HIS/HER GRADING ACTIVITIES.
23. SLOPES EXCEEDING 5 FEET IN HEIGHT SHALL BE PLANTED WITH AN APPROVED PLANT MATERIAL. IN ADDITION, SLOPES EXCEEDING 15 FEET IN HEIGHT SHALL BE PROVIDED WITH AN APPROVED IRRIGATION SYSTEM UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
24. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.
25. THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
26. ALL WATER VALVES AND SEWER MANHOLES SHALL REMAIN ACCESSIBLE AND FREE OF DEBRIS THROUGHOUT ALL PHASES OF THE PROJECT.
27. INSTALL $\frac{3}{4}$ " PLYWOOD FALSE BOTTOMS IN ALL SEWER MANHOLES WITHIN THE CONSTRUCTION AREA (CHECKED DAILY BY INSPECTOR).
28. PROVIDE TRAP AT FIRST MANHOLE DOWNSTREAM OF PROPOSED IMPROVEMENTS (CHECKED DAILY BY INSPECTOR).
29. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING.

GENERAL NOTES FOR GRADING PLANS (CONTINUED)

30. GRADING OPERATIONS, INCLUDING MAINTENANCE OF EQUIPMENT, SHALL BE CONDUCTED BETWEEN THE HOURS OF 7:00 A.M. AND 3:30 P.M. MONDAY THROUGH FRIDAY. NO WORK SHALL BE ALLOWED ON WEEKENDS.
- A ALL CONSTRUCTION VEHICLES OR EQUIPMENT, FIXED OR MOBILE, OPERATED WITHIN 1,000 FEET OF A DWELLING SHALL BE EQUIPPED WITH PROPERLY OPERATING AND MAINTAINED MUFFLERS.
 - B ALL OPERATIONS SHALL COMPLY WITH CITY OF UPLAND NOISE ORDINANCE (CHAPTER 4.5, UNNECESSARY NOISE.)
 - C STOCKPILING AND/OR VEHICLE STAGING AREAS SHALL BE LOCATED AS FAR AS PRACTICABLE FROM DWELLINGS AND WITHIN THE LIMITS OF GRADING PERMIT.
31. GRADING AND EXCAVATION SHALL BE HALTED DURING PERIODS OF HIGH WINDS. ACCORDING TO AQMD MEASURE F-4, HIGH WINDS ARE DEFINED AS 30 MPH OR GREATER. THIS LEVEL OCCURS ONLY UNDER EXTREME CONDITIONS, SUCH AS SANTA ANA WIND CONDITIONS. USE WATER TRUCK FOR DUST CONTROL.
32. THE CIVIL ENGINEER, AS A CONDITION OF ROUGH GRADE APPROVAL, SHALL PROVIDE A BLUE TOP WITH ACCOMPANYING WITNESS STAKE, SET AT THE CENTER OF EACH PAD REFLECTING THE PAD ELEVATION FOR PRECISE PERMITS AND A BLUE TOP WITH WITNESS STAKE SET AT THE DRAINAGE SWALE HIGH POINT REFLECTING THE HIGH POINT ELEVATION FOR ROUGH GRADING PERMITS.
33. THE ENGINEERING GEOLOGIST SHALL PERFORM PERIODIC INSPECTIONS AND SUBMIT A COMPLETE REPORT AND MAP UPON COMPLETION OF THE ROUGH GRADING.
34. THE GRADING CONTRACTOR SHALL SUBMIT A STATEMENT OF COMPLIANCE TO THE APPROVED GRADING PLAN BEFORE FINAL APPROVAL.
35. IN THE EVENT THAT SOIL CONTAMINATION IS DISCOVERED DURING EXCAVATION OR REMOVAL OF AN EXISTING TANK IS NECESSARY, WORK SHALL BE STOPPED UNTIL A SITE ASSESSMENT AND MITIGATION PLAN HAS BEEN PREPARED, SUBMITTED AND APPROVED BY COUNTY OF SAN BERNARDINO DEPARTMENT OF ENVIRONMENTAL HEALTH.
36. THE DEVELOPER SHALL BE RESPONSIBLE FOR SUBMITTING TO THE CITY PROOF THAT A NOTICE OF INTENT (NOI) FOR THE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAS BEEN FILED WITH AND APPROVED BY THE STATE WATER RESOURCES CONTROL BOARD. CONSTRUCTION SHALL NOT COMMENCE WITHOUT THIS APPROVAL. THE DEVELOPER SHALL BE RESPONSIBLE TO COMPLY WITH THE GENERAL CONSTRUCTION ACTIVITY STORM WATER PERMIT BY IMPLEMENTING THEIR STORM WATER POLLUTION PREVENTION PLAN FOR THE DURATION OF THE PROJECT. INDICATE WDID NUMBER ON PLANS.

6.6 GENERAL NOTES FOR EROSION CONTROL PLANS

1. IN THE CASE OF EMERGENCY, CALL _____ AT WORK PHONE NUMBER ____
_____ OR HOME PHONE NUMBER _____.
2. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
3. EROSION CONTROL DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE CITY INSPECTOR.
4. ALL REMOVABLE EROSION PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5-DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.
5. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREETS, CHECK BERMS, AND BASINS.
6. GRADED AREAS ON THE PERMITTED AREA PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE IS TO BE DIRECTED TOWARD DESILTING FACILITIES.
7. THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
8. THE PERMITTEE AND CONTRACTOR SHALL INSPECT THE EROSION CONTROL WORK AND ENSURE THAT THE WORK IS IN ACCORDANCE WITH THE APPROVED PLANS.
9. ANY SLOPES WITH DISTURBED SOILS OR DENUDED VEGETATION MUST BE STABILIZED TO INHIBIT EROSION BY WIND AND WATER.
10. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEEPED UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
11. CONSTRUCTION SITES SHALL BE MAINTAINED BY IMPLEMENTATION OF BEST MANAGEMENT PRACTICES (BMP) IN SUCH A MANNER THAT POLLUTANTS ARE NOT DISCHARGED FROM THE SITE TO THE MAXIMUM EXTENT PRACTICABLE.
12. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE, OR WIND.
13. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND AND WATER.
14. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.

GENERAL NOTES FOR EROSION CONTROL PLANS (CONTINUED)

15. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC RIGHT-OF-WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
16. ALL NON-STORMWATER DISCHARGES, UNLESS ACCEPTED OR AUTHORIZED BY AN NPDES PERMIT, REQUIRE PRIOR APPROVAL BY THE STATE WATER RESOURCES CONTROL BOARD.
17. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.

6.7. GENERAL FOR NOTES TRAFFIC CONTROL

1. ALL WORK AND MATERIALS SHALL COMPLY WITH THE WORK AREA TRAFFIC CONTROL HANDBOOK (W.A.T.C.H) LATEST EDITION.
2. ALL STRIPING AND MARKINGS SHALL CONFORM TO THE STATE OF CALIFORNIA, STANDARD PLANS AND SPECIFICATIONS, AND THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), LATEST EDITION.
3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES.
4. FLASHING YELLOW BEACONS TYPE "B" SHALL BE USED ON ALL W20-1 SIGNS AND ON ALL TYPE III BARRICADES GUARDING THE WORK AREA OVERNIGHT.
5. ALL SIGNS SHALL BE REFLECTORIZED AND STANDARD SIZE PER THE LATEST EDITION OF THE CALIFORNIA M.U.T.C.D.
6. ALL TUBULAR DELINEATORS AND CONES SHALL BE 28" MINIMUM HEIGHT, REFLECTORIZED AND MAINTAINED ERECT IN THE INDICATED POSITION AT ALL TIMES, AND SHALL BE REPAIRED, REPLACED, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY, AND SHALL INCLUDE A 12" HIGH INTENSITY REFLECTORIZED SLEEVE, IF USED DURING NIGHT-TIME HOURS.
7. THE CONTRACTOR SHALL MAINTAIN, ON A CONTINUOUS BASIS, ALL SIGNS, DELINEATORS, ETC., TO ENSURE PROPER FLOW AND SAFETY OF TRAFFIC DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL HAVE ALL SIGNS, DELINEATORS, BARRICADES, ETC., PROPERLY INSTALLED PRIOR TO COMMENCING CONSTRUCTION.
9. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ABUTTING PROPERTY OWNERS.
10. ADDITIONAL TRAFFIC CONTROLS, TRAFFIC SIGNS, OR BARRICADING MAY BE REQUIRED IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ANY ADDITIONAL DEVICES NECESSARY TO ASSURE SAFETY TO THE PUBLIC AT ALL TIMES.
11. EXACT LOCATION AND TYPE OF CONSTRUCTION SIGNS SHALL BE DIRECTED BY THE ENGINEER BASED UPON CONSTRUCTION CONDITIONS.
12. MOVE DELINEATORS AND/OR CONES TO SIDEWALK DURING NON-WORKING HOURS. REMOVE BARRICADES ETC. FROM TRAVEL LANE.
13. REMOVE OR TURN OFF SIGNS DURING NON-WORK HOURS.
14. ALL CONFLICTING LINES, EXISTING CURB PAINT, AND MARKINGS SHALL BE REMOVED BY WET SANDBLASTING OR OTHER APPROVED METHOD PRIOR TO INSTALLATION OF NEW/TEMPORARY STRIPING. ALL CONFLICTING RAISED PAVEMENT MARKERS SHALL BE REMOVED. PAVEMENT THAT IS DAMAGED DUE TO REMOVAL OF MARKERS SHALL BE REPAIRED TO THE SATISFACTION OF THE PUBLIC WORKS DIRECTOR/ INSPECTOR.
15. WORK HOURS SHALL BE 7:00 A.M. – 3:30 P.M., MONDAY THROUGH FRIDAY UNLESS NOTED ON THE PERMIT.
16. PRE-CONSTRUCTION MEETINGS SHALL BE ARRANGED WITH THE PUBLIC WORKS INSPECTOR & TRAFFIC ENGINEER.

VII. NPDES

The NPDES facilities are required by the Water Quality Control Board, conditioned and plan checked by Public Works or when a MDP or Flood Control facility will be connected to constructed or maintained, Flood Control will review and condition for the WQMP and drainage improvements, check plans, and inspect construction. If no Flood Control facilities, permit or Master plan as part of the project then Public Works will review, condition and inspect the WQMP facilities. Plans with NPDES facilities will be approved by Public Works or Flood Control, when Flood reviews anything they issue a letter stating the conditions have been met, which allows Public Works to sign the street plans.

BMP Facilities Management Agreement:

- For private On-Site NPDES facilities, the Developer must execute an Agreement to maintain the BMP facilities. See Appendix. This may be executed by Public Works.
- NPDES facilities (fossil filters in catch basins) when allowed within the road right of way must be maintained through L&LMD 89-1-consolidated. Also, Bio-swale maintenance is provided by the Landscape Maintenance District when allowed in road right-of-way and must be annexed.

As a general rule, no NPDES facilities are allowed within the road right-of-way. When geographical constraints do not facilitate on-site treatment of flows a coordination meeting is required to include: Public Works, owner and engineer so all can agree on treatment facility, location and maintenance.

When WQMP has been reviewed and is near approval by Public Works or Flood Control, the BMP Agreement is processed and executed by Public Works and a copy is to be provided for inclusion into the WQMP prior to its approval.

No underground treatment or storage devices are allowed in the road right-of-way.

All facilities proposed within right-of-way shall be annexed for maintenance unless approved by Public Works.

No closed water quality treatment facilities allowed in road right-of-way.



VIII. DESIGNING TO ACCOMMODATE PEDESTRIAN ACCESSIBILITY REQUIREMENTS

A. DISABILITY ACCESS LEGISLATION AND DESIGN STANDARDS

To prohibit discrimination on the basis of disability, the Federal government enacted the Rehabilitation Act of 1973 (Section 504) and the Americans with Disabilities Act of 1990 (ADA). The ADA requires that persons with disabilities be provided with an equal opportunity to benefit from government programs, services and activities. These programs include pedestrian access routes within public road rights-of-way that are constructed with public or private funds.

The United States Department of Justice (USDOJ) published the “2010 ADA Standards for Accessible Design” prepared by the United States Architectural and Public Works Barriers Compliance Board (US Access Board). Since pedestrian facilities in the public right-of-way can pose unique design challenges, the US Access Board has developed the draft “2011 Public Right Of Way Accessibility Guidelines” (PROWAG). The USDOJ and the Federal Highway Administration (FHWA) have accepted the use of the draft PROWAG for best design practices in the public right-of-way until the final PROWAG is ultimately adopted by the USDOJ. In addition, the State of California has adopted accessibility requirements in its “California Building Code” (CBC), “California Manual of Uniform Traffic Control Devices” (CAMUTCD), and “Caltrans Standard Plans” (CSP) that meet or exceed the 2010 ADA Standards. The City of Upland requires the use of the latest PROWAG, CBC, CAMUTCD, and CSP for accessibility design in the public right-of-way. In addition, the City can and has established accessibility design requirements, as shown in City of Upland Ordinance and Standard Plans and Specifications, that may be more stringent than Federal or State requirements. Where Federal, State and/or City requirements do not match, the most stringent criteria will apply.

Attached in the Appendix are updated City of Upland Standard Drawings for Curb Ramps. These updates include the requirement for flatter design slopes (7.5% maximum ramp slope and 1.5% maximum sidewalk slope) to accommodate construction tolerances to ensure that ADA minimum/maximum requirements are met. All design must be made using the flatter slopes.

It is the responsibility of the engineer of record for the project to know and apply all Federal, State and City accessibility design criteria.

B. REQUIRED IMPROVEMENTS

The ADA specifies that when roads and/or sidewalks are *newly built* or *altered*, curb ramps must be installed where they are missing and upgraded to current standards where they are existing. According to a 2013 joint letter from the USDOJ and FHWA, altered improvements include, among other items, any type of pavement reconstruction or resurfacing, such as overlay (any depth), micro-surfacing, and cape seal. (The only exceptions are slurry seal, chip seal and pothole filling, which are considered *maintenance*). The requirement

for accessible improvements extends to the full project frontage and may extend to the opposite sides of the street where the City determines that the project has created a nexus and need for accessibility improvements.

C. MINIMUM SIDEWALK WIDTH, OBSTACLES

According to Federal and State requirements, the pedestrian access route is 48 inches minimum, 60 inches preferred. In cases where sidewalk is 48 inches wide, turnouts of 60 inches by 60 inches must be provided every 200 feet. The width of the top of curb is not included in the measurement of minimum sidewalk width. The minimum sidewalk width per City Ordinance No. 461 is 64 inches adjacent to back-of-curb or 60 inches not adjacent to back-of-curb. The City standard will supersede Federal and State minimums unless otherwise approved by the Director of Public Works.

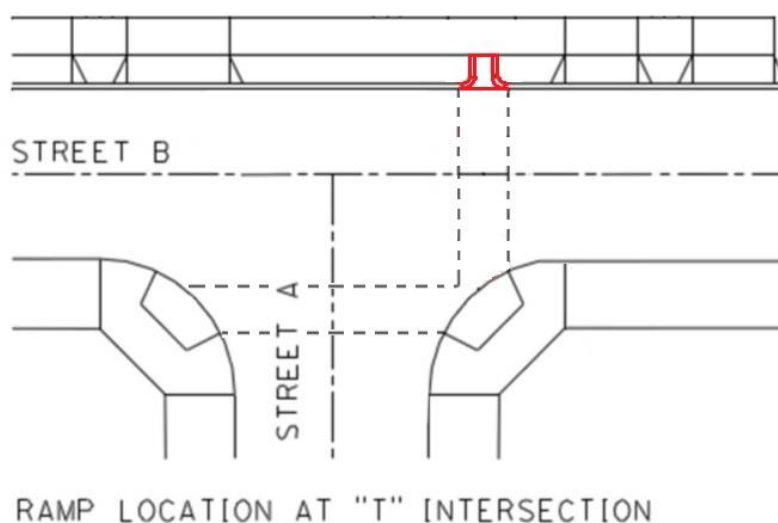
Objects, such as street lights, utility poles, utility cabinets, fire hydrants, sign posts, signs, parking meters, trash receptacles, public telephones, mailboxes, newspaper stands, benches, transit shelters, kiosks, bicycle racks, planters, trees, street sculptures and opening doors, should be avoided in the pedestrian path of travel. Where obstacles exist, they must not reduce the minimum width of the pedestrian path of travel as determined by State and Federal standards. The current minimum width around obstacles, for short distances of 24 inches or less in the direction of travel, is 32 inches per Federal 2010 ADA Standards and 36 inches per State CBC. Since the most stringent requirement prevails, 36 inches is the minimum distance around an obstacle. As part of the development of the draft PROWAG, the Federal minimum width is proposed to be increased to 48 inches. If and when adopted, the 48 inch requirement would supersede all other Federal, State and City requirements. The use of any sidewalk width of less than 60 inches in new construction requires the prior approval of the Director of Public Works. It should be noted that for new construction with adequate right-of-way width, full sidewalk width of 60 inches should meander around obstacles such as street light poles, utility poles and multiple mail box units as is depicted on City Ordinance.

The cross slope of sidewalk perpendicular to the pedestrian access route, or in any direction within a landing, is 2% maximum. The longitudinal slope along the pedestrian access route parallel to a public street and within public right-of-way is allowed to equal the street grade. Where the pedestrian access route is not parallel to and within public right-of-way (such as sidewalk with meandering horizontal and vertical alignments), the longitudinal slope is 5% maximum.

D. PEDESTRIAN STREET CROSSINGS

In accordance with the California Vehicle Code, crosswalks whether marked or not are provided at all street intersections, including T-intersections. Therefore, curb ramps shall be provided at all intersection corners, including at least one curb ramp across from T-intersections as shown in City Standard and as shown in the figure below. Marked crosswalks shall provide for a 10 foot minimum inside width and 12 foot minimum outside

width, and a minimum of 4.0 feet clearance between the flow line of the diagonal curb ramp and the inside edge of the marked crosswalk.



The maximum cross slope of the pedestrian route of travel for *marked or unmarked* pedestrian street crossings in new construction is:

- 2% maximum for legs of an intersection with stop or yield control
- 5% maximum for legs of an intersection without stop, yield or green light signalization
- Allowed to equal the street grade for mid-block crossings

The maximum longitudinal slope along the pedestrian route of travel for *marked or unmarked* pedestrian street crossings in new construction is:

- 5% maximum

The clear width of pedestrian access routes within medians and pedestrian refuge islands shall be 5.0 feet minimum. Medians with short lengths should utilize curb cuts without the use of ramps. Detectable warning surfaces, 36 inches deep by the width of the pedestrian route, should be provided at the entry and exit of median islands that are 8.0 feet long or more. Detectable warning surfaces, 24 inches deep each, should be provided at the entry and exit of median islands that are between 8.0 and 6.0 feet long. No detectable warning surfaces should be placed where medians are less than 6.0 feet long.

E. CURB RAMPS

Curb ramps at intersection curb returns shall comply with City Ordinance and Standards. Curb ramps at T-intersections and mid-block crosswalks shall comply with City Ordinance.

General criteria for curb ramp design is shown below:

- ☐ Ramp width (not including flared sides) is 48 inches minimum.
- ☐ Ramp width with constraints on one or more side by a curb is 60 inches minimum.
- ☐ Ramp running slope is 7.5% maximum for design (8.33% maximum as-built construction)
- ☐ Pedestrian access route cross slope for ramps, landings and sidewalks is 1.5% maximum for design (2.00% maximum as-built construction). Note: the maximum cross slope applies to all locations along the pedestrian access route on sidewalks and ramps, including the bottom of the ramp along the street flow line.
- ☐ Flared sides are 10.0% maximum adjacent to the curb.
- ☐ Clear landing width at the top of a ramp is 48 inches by 48 inches minimum.
- ☐ Clear landing width at the bottom of a parallel curb ramp is 60 inches by 60 inches minimum.
- ☐ Transition of the ramp at the gutter flow line is flush (without a lip).
- ☐ Slope of the roadway from the gutter flow line to 4 feet into the roadway is 5% maximum.
- ☐ Ramp is located within the limits of a marked crosswalk.
- ☐ Detectable warning surface is the full width of the at-grade section at the entrance to a vehicular way with a 36 inches minimum depth.
- ☐ Maximum required length of a curb ramp is 15 feet.

Note: A 12 inch-wide grooved border is no longer a requirement of the CBC or 2010 ADA Standards.

To demonstrate compliance with accessibility standards, the design engineer shall provide a detail on the street improvement plans for each ramp for which the incoming street grade at one or both BCR/ECR is 5% or steeper. The detail shall show key design elevations, slopes and widths at 1"=10' scale.

F. STEEP TERRAIN

Sidewalks built on steep terrain make access difficult for people with mobility impairments. As discussed in the US Access Board's Section-by-Section Analysis of PROWAG Section R302.6:

In new construction, where pedestrian access routes within sidewalks intersect at corners, the 2 percent maximum cross slope requirement will result in level corners (i.e., the slope at the corners will not exceed 2 percent in each direction of pedestrian travel). The level corners will provide a platform for providing level spaces for curb ramps and blended transitions, pedestrian street crossings, and accessible pedestrian signals and pedestrian pushbuttons.

Where pedestrian street crossings with yield or stop control are provided at newly constructed tabled intersections, the tabling would be extended to the pedestrian street crossings to comply with the 2 percent maximum cross slope for pedestrian access routes within the pedestrian street crossings.

The FHWA discusses curb ramps on steep terrain in their publication “Designing Sidewalks and Trails for Access (Part II Section 7.4.6)”:

...In the past, some designers have decided not to provide curb ramps on steep sidewalks because of the erroneous assumption that individuals with mobility impairments could not travel on significant grades. However, even if the terrain is extremely steep, curb ramps should be provided so individuals using powered mobility devices (e.g., a scooter) or traveling with assistance will be able to access the sidewalk.

...

When addressing steep grades at an intersection, it is best to extend the level area of the intersection to include the curb ramp and the landing. Although this significantly increases the grade of the path leading toward or away from the intersection, it is recommended because it enables people to cross the roadway and transition from the roadway to the sidewalk on a level surface. If this segment of the sidewalk corridor is not level, the problems caused by steep terrain are often magnified...

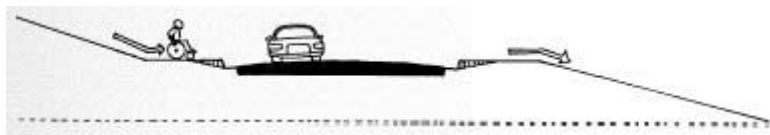


Figure 7-39. GOOD DESIGN: The level area of an intersection should be extended to include the curb ramps and the level landings above them.

In addition to providing well-designed curb ramps, extending the level area of the street intersection into the crosswalk areas will also ensure that the crosswalks are level. If the grade of the street slopes up or down, the slope of the street becomes a cross slope for pedestrians (in the crosswalk).

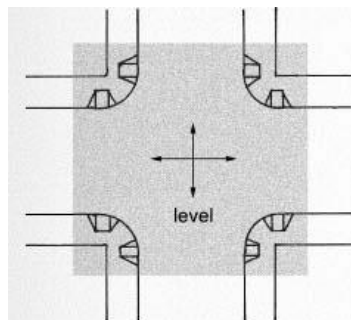


Figure 7-40. The shaded area represents the level portion of the intersection.

G. DESIGN EXCEPTIONS

The USDOJ has recognized that exceptions to the design standards are allowed when applying the standards may be technically infeasible, structurally impracticable, or threatens historically significant features of a qualified historic facility. Even for qualified exceptions, any portion of a facility that can be made accessible will need to be made accessible to the maximum extent feasible. Furthermore, if accommodating access for individuals with certain disabilities (e.g., those who use wheelchairs) would be technically infeasible, accessibility shall nonetheless be ensured to persons with other types of disabilities (e.g., those who use a walker or cane, or those who have sight, hearing or mental impairments). For instance, the requirement to install curb ramps will not be waived in steep terrain, because individuals using powered mobility devices (e.g., a scooter) or traveling with assistance will be able to access the sidewalk.

Any exception to Federal, State or City requirements must receive approval in writing from the City of Upland Director of Public Works in a Design Exception document prepared by the engineer of record for the project, prior to the approval of improvement plans.

While design engineers may encounter situations that are technically infeasible when tying into existing improvements, it is expected that all new streets be designed with full accessibility compliance without the opportunity for design exceptions. The design engineers should therefore apply all accessibility design criteria during the preparation of feasibility studies, conceptual drawings, tentative maps, and improvement plans prior to plan check submittal. Plans that do not meet full accessibility requirements, but which had the ability to meet full accessibility requirements if designed as such from the beginning, will not be granted a design exception and the project will need to be redesigned.

In the event that non-compliance is encountered during construction, it is the engineer of record's responsibility to provide a design solution, and the project owner's responsibility to re-construct improvements as necessary, such that full compliance is met. The City of Upland will not accept improvements along public pedestrian routes that are non-compliant as it would leave the City exposed to civil rights litigation.

According to FHWA regarding cost:

Cost may not be a reason to fail to construct or delay constructing a new facility so that the facility is readily accessible to and useable by persons with disabilities under the ADAAG standards.

28 CFR §35.151(a); see DOJ Technical Assistance Manual for Title II of the ADA, II-6.3100(3). (9-12-06)

IX. TRAFFIC SIGNING AND STRIPING PLANS

A. INTRODUCTION

Traffic signing and striping plans are required for all General Plan Roads and any roadway that is 56-foot wide curb-to-curb (78' R/W) or wider. Public Works Department may require traffic signing and striping plans for smaller classification roadways or provide information in street plan if allowed by Public Works.

Traffic signing and striping plans shall be designed as a “stand alone” set of plans. Do not show existing topography, contours, or elevations on signing and striping plans unless such information is necessary to perform the work of the signing and striping portion of the project. No references and/or notes shall be directed to the street plans.

Since striping plans determine whether additional roadway improvements are needed to accommodate pavement and/or striping transitions, striping plans shall be submitted with the first street plan submittal to minimize changes to the street plans at later stages.

B. GENERAL REQUIREMENTS

1. All design shall conform to the latest edition of California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD), Caltrans Standard Plans, Caltrans Standard Specifications, and City of Upland Standards.
2. Computer Aided Drafting and Design (CADD) shall be used to prepare all design plans. Upon completion and final approval of the plans, the City shall be furnished with MicroStation files of the designs.
3. Each final plan shall be printed on a 24" x 36" sheet of polyester base film (Mylar) using City Standard Title Block (title block exhibit.) Self-adhesive or stick-on labels and certificates shall not be used. Final plans shall be signed & stamped by the Registered Civil or Traffic Engineer responsible for the preparation of the design.
4. Minimum lettering size used for the plans shall be 0.12 inch in height.
5. The title sheet of the “stand alone” plan set shall include but not limited to the following information:
 - a. Project Title, project number and IP number.
 - b. Vicinity Map with North Arrow -

Project shall be shown in relation to major streets and highways within mile radius of project. A larger area shall be used if no major roads exist within that distance. Thomas Brothers Guide and/or any other commercial street map is not acceptable.

- c. Section, Township and Range (to be shown below the vicinity map)
 - d. General notes
 - e. A complete list of Construction notes. The quantities must show on the Construction Cost Estimate.
 - f. Quantity Estimates, numbered with units and matching the Construction Cost Estimate.
 - g. List of symbols and abbreviations used on the project
 - h. Sheet index, if more than one sheet is needed.
6. Each design plan shall include but not limited to the following information:
- a. North arrow, drawing scale and 4" bar scale. North Arrow shall be oriented up or to the right on all plans.
 - b. Tract number and parcel map number of adjacent developments.
 - c. Curbs and gutters, dikes, edge of pavements, rights-of-way and labeled as such.
 - d. Jurisdictional boundaries with respective jurisdictions labeled on each side of the boundary lines.
 - e. Street names of all streets shown with appropriate street suffixes (Ave, Blvd, Rd, etc.) All private streets, driveways, and any road not maintained by the City shall be identified on plans.
 - f. Record centerlines, survey centerlines and/or construction centerlines with stations at 100-foot intervals. Centerline stationing shall correspond with street improvement plan centerline stationing and shall increase from South-to-North or West-to-East. When a conflict occurs, stationing shall start from left to right.
 - g. Roadway and right-of-way dimensions.
 - h. Applicable construction notes. Indicate the entity performing each item of work by labeling each construction note with either "by Contractor" or "by City". The contractor quantities must show on the Construction Cost Estimate.
 - i. All installations and removals shall be specified on plans with construction note numbers and types.
7. Any project that involves existing or proposed school frontage shall implement school zone signing and striping per CA MUTCD. City Traffic Engineer shall be consulted as work may affect school zone diagram or suggested route to school. Plans shall clearly show the school property line, the name of the school, school driveway(s) with entrance and exit markings, and school bus loading zone.
8. Plans shall show any existing or proposed parking restrictions using appropriate signs and markings. City Traffic Engineer shall be consulted in order to determine the needs for any parking restrictions.

9. Access roads will receive centerline striping if they are curvilinear. Straight access roads may need no striping depending on plan check comments. The advisory speed limit sign, W13-1, if required shall show "Speed to be determined in field" on the plans. Route turns must have arrow signs, W1-6; W1-1 or W1-2 with W13-1 (advisory speed sign) shall be added if approach is over 500'.
10. Stop sign control requirements:
 - a. At a tee intersection of two Local roads, no Stop control is required.
 - b. At a cross intersection of two Local roads, Stop signs shall be placed on one road to designate the other as the "through road".
 - c. At a tee or cross intersection of a Local road and a Collector or above, Stop sign shall be placed on the Local road to designate the Collector or above as the "through road".
 - d. All-Way Stop Control -
 1. All way stop control is governed by City Council Policy. All-way-stop-control is not recommended if the criterion for Policy is not met unless the field conditions the City traffic engineer deem necessary.
 2. All-way-stop-control may be placed at an intersection that is within 500 meter (1500 feet) of school property line. The location would also need to be identified as a walking path to school.
 - e. Pavement Marking -
 1. 12" white limit line (or crosswalk) and "Stop" pavement legend shall be installed with the stop sign where the cross street is already striped or will be striped as part of the project.
 2. Where the existing crossroad is not striped, and will not be striped as part of this project, only a "Stop" sign is required.
 3. A "stop" sign and limit line, without stop stencil is used where additional emphasis is needed, based on field review.
11. 25 mph speed limit sign, R2-1(25), shall be installed at the entrance roads to residential tracts under the following conditions:
 - a. The residential tract is a Schedule "A", "B" and "D" tracts.
 - b. Entrance road connects to a road having a right of way width of at least 100 feet.
 - c. Entrance road qualifies as "Residence District" per California Vehicle Code definition.
12. A "No Outlet" sign, W14-2, shall be placed at entrance to a stub street that is over 500' in length, or where the end of the street is not visible from the intersection, or road network from which there is no exit in the newly constructed tract streets.
13. No RVs and Trailers parking sign in accordance with City of Upland Ordinance shall be installed at all entrance roads to residential tracts.

C. DESIGN REQUIREMENTS

1. Traffic signing and striping plans shall use 1"=40' scale minimum. 1"=20' or 1"=10' scale shall be used when additional clarity is required.
2. Centerline and/or lane stripes are required for general plan roads, any roadway that is 56-foot wide curb-to-curb or wider, and any roadway required by the Public Works Department. Pavement less than 500' in length is normally not considered a lane of traffic (lane will not be striped).
3. Show widths of travel lanes at limit line, intersection, and at begin and end of taper.
4. Show centerline stations at begin and end of tapering stripes, and taper ratio adjacent to tapered stripes. Use taper rates to the nearest whole number.
5. Show distances between painted edge line and edge of pavement.
6. Show distances between centerlines and curbs, edge of pavements, and right-of-way.
7. Show existing traffic control devices, pavement markings, and striping up to 300' beyond the project limits or as determined by the Public Works Department with thin line weight and solid line style.
8. Dimension existing and proposed sign and pavement marking locations to the nearest cross street centerline or use centerline station.
9. Show existing striping to be removed with thin line weight and short dashed line style. Do not fade line work.
10. Show new signing and striping with thick line weight and solid line style.
11. Total quantities of sandblasting and grinding in square feet shall be shown on the plans.
12. Pavement taper formula:
 - a. For low speed roads, (design speed 25 mph or less) tapers on pavement shall be minimum of 2:1 for widening traffic and 10:1 for merging traffic.
 - b. For roads having a design speed greater than 25 mph, taper length for merging lanes or lane drops shall follow Caltrans standard:
$$\text{Taper Length (ft)} = \text{Design Speed (mph)} \times \text{Distance Traffic Moves Laterally (ft)}$$
13. Striping taper formula:
$$\text{Taper Length (ft)} = \text{Posted Speed (mph)} \times \text{Distance Traffic Moves Laterally (ft)}$$
$$\text{Taper ratio} = \text{Taper Length (ft)} : \text{Distance Traffic Moves Laterally (ft)}$$
14. Lane drop signing and marking shall be installed per Figure 3B-12 (CA) of CA MUTCD.

15. Type "F" (white) reflector posts shall be installed at all merging lanes or lane drops at 25' intervals. Minimum of 3 reflectors shall be installed.
16. Minimum left-turn pocket length, lane width, and pocket transition length at general plan highway crossing for Secondary Highway or above shall be per City Ordinance.
17. Minimum left-turn pocket length at minor crossing is 100', but may be extended to 150' or 200' for facilities that generate higher frequency of left turn movements and/or truck traffic. Standard transition for left turn

pocket shall be 120'. A 90' transition may be allowed where conditions do not allow for the standard length, and must follow the Fact Sheet Process for a substandard installation. Two-way left-turn lane is to be painted where a road has multiple access points; otherwise a painted median is acceptable.

D. GENERAL SIGNING AND STRIPING NOTES

The following general notes shall be shown on the title sheet:

1. All material and work shall conform to the latest edition of City of Upland Standard Plans, Caltrans Standard Plans and Standard Specifications, and California Manual on Uniform Traffic Control Devices.
2. All traffic stripes, pavement markings, and signs shall be reflectorized and in standard size. All striping and marking details shall match Caltrans Standard Plans details. Stencils for pavement marking shall match Caltrans Standard Plans.
3. The Contractor shall remove all conflicting stripes, pavement markings, and raised pavement markers in accordance with the plans and as directed by the Engineer. Word or symbol pavement markings shall be removed by sandblasting or grinding a rectangular area covering the whole marking.
4. All crosswalks shall have 10 feet in between the 12-inch white or yellow stripes.
5. All double yellow stripes shall have 3-inch painted black line separating the yellow stripes.
6. The Contractor shall furnish and install all traffic stripes, raised pavement markers (RPMs), pavement markings, and signs in accordance with the plans and as directed by the Engineer.
7. All pavement markings including crosswalks, limit lines, and stop bars shall be applied with thermoplastic material. All other traffic stripes shall be painted in two coats.
8. All RPMs shall be installed within seven working days of roadway striping. All existing RPMs within the project area shall be replaced in kind or removed in accordance with the plans, or as directed by the Engineer.

9. The Contractor shall install standard size sign panel on 2" square perforated steel tube post with two piece anchor and sleeve, fastened with 3/8" rivets with stainless steel washers, unless otherwise noted. The exact location of all signs shall be determined in the field by the Engineer.
10. The Contractor shall remove signs in accordance with the plans and as directed by the Engineer. The Contractor shall deliver removed signs to the City Yard or as directed by the Engineer.
11. The Contractor shall submit a traffic signal timing sheet to the City for review and approval prior to the beginning of construction of any new or modified traffic signal. The timing sheet will meet all requirements per the latest California MUTCD, Part 4 "Highway Traffic Signals".
12. The Contractor shall replace all signing and striping within project limits damaged or altered by the project, as determined by the City engineer.



Exhibit SS-2

CITY OF UPLAND
PUBLIC WORKS DEPARTMENT

**PREFERED MICROSTATION
LEVELS, COLORS AND PLOTTED LINE WEIGHTS**

TO BE USED FOR ALL DRAWINGS
ELECTRONICALLY SUBMITTED TO THE COUNTY

	COLOR	WEIGHT
LEVEL 1		
TITLE BLOCK	RED	.70mm
EXISTING STREET IMPROVEMENTS	WHITE	.25mm
RIGHT-OF-WAY LINES	RED	.70mm
LEVEL 2		
CONDUCTOR SCHEDULE	BLUE	.35mm
POLE SCHEDULE	BLUE	.35mm
PHASE DIAGRAM	BLUE	.35mm
SENSOR TABLE	BLUE	.35mm
LEVEL 3		
ALL NEW SIGNAL EQUIPMENT	GREEN	.50mm
NEW CONDUIT	GREEN	.50mm
NEW DETECTOR LOOPS	GREEN	.50mm
LEVEL 4		
EXISTING STRIPING, SIGNING AND MARKINGS	BLUE	.35mm
LEVEL 5		
PROPOSED STRIPING, SIGNING AND MARKINGS	GREEN	.35mm
LEVEL 6		
ALL UTILITIES	WHITE	.25mm
LEVEL 7		
TEXT	BLUE	.35mm
DIMENSIONS	BLUE	.35mm
SPECIFIC DETAILS (NORTH ARROW, USA ALERT)	GREEN	.50mm
LEVEL 8		
PROPOSED STREET IMPROVEMENTS	GREEN	.50mm
LEVEL 9		
CENTERLINES	WHITE	.25mm
LEVEL 10		
AREAS FILLED WITH HATCHED LINES	WHITE	.25mm
LEVEL 11		
AREAS CONAING HATCHED LINES	GREEN	.50mm
LEVEL 12		
EXISTING SIGNAL EQUIPMENT	WHITE	.25mm

X. TRAFFIC SIGNAL PLAN

A. INTRODUCTION

Traffic signal and striping plans are required for new traffic signal installations and/or traffic signal modifications. Traffic safety, capacity, delay, and fuel efficiency are some of the elements that shall be considered when designing a traffic signal plan.

Traffic signal plans can be part of the signing and striping plan set or “stand alone” set of plans. Do not show existing topography, contours, or elevations on signal plans unless such information is necessary to perform traffic signal work. No references and/or notes shall be directed to the street improvement plans. Each signal needs to be on a separate set of plans.

It is understood that each traffic signal project has its unique characteristics. Design criteria provided here is to be used as a general design guideline only. Good traffic engineering judgment shall be called upon to provide an integrated traffic signal design. Following these guidelines will help expedite the plan check process.

B. GENERAL REQUIREMENTS

See subsection B. General Requirements under Section VIII, Traffic Signing and Striping Plan.

C. DESIGN REQUIREMENTS

1. Traffic Signal plan shall use 1"=20' scale. 1"=10' scale shall be used when additional clarity is required.
2. Signal Plan Number (SG-xxxx)
Contact your respective City Development Review Plan Checker for signal plan number to be shown on each design plan, as well as the address for the electrical meter.
3. Lines and Symbols
Line weights, line style, symbols, construction notes, and abbreviations used on all plans shall follow Caltrans Standard Plans A10C, A10D, ES-1A, ES-1B and ES-1C, or as directed by the Public Works Department.
4. Intersection Base Map
The plan shall clearly show existing, proposed, and ultimate roadway geometrics with the major street horizontal on the plan if feasible. Including but not limited to the following and labeled as such:
 - a. Curb and gutter
 - b. Asphalt berm and dike

- c. Edge of pavement
- d. Driveways
- e. Sidewalk and access ramps
- f. Right-of-way and maintenance easement
- g. Drainage facilities
- h. Underground and above ground utilities
- i. Traffic control devices, markings, and striping

5. **Access Ramps**

Access ramps shall be installed per City of Upland Standard No. 403 wherever crosswalks or pedestrian signals are proposed.

Where standard access ramp cannot be installed, a modified version that met American with Disabilities Act requirements shall be used and shown and detailed on the street improvement plans.

6. **Right-of-way**

It is necessary to show rights-of-way (ROW) in order to determine whether additional ROW is required to construct the traffic signal. Evidence of ROW shall consist of recorded maps or legal instruments of property transfer. If additional ROW is required, dedication from the developer shall be processed concurrently with the improvement plans. If additional ROW required is offsite on private property, the developer is required to obtain the necessary ROW from the property owner and process a separate dedication concurrently with the improvement plans.

7. **Maintenance/Construction Easement**

Maintenance easement for traffic control device installed on project site has to be identified on plans and dedicated by the developer. If maintenance and/or construction easement required is offsite on private property, the developer is required to obtain the necessary easement from the property owner. Easement dedication shall be processed concurrently with the improvement plans. Owner shall apply for and annex all new or modified signals conditioned for the project into CFD for signal maintenance.

8. **Dimensions**

Distance of advance detectors and flashing beacons from limit lines shall be shown on the plans. When a separate striping plan is not required, complete dimensioning shall be shown. This includes road and lane widths, right-of-way, turn lane storage lengths, striping taper lengths, and distance of signs and markings.

If a separate signing and striping plan is required it shall be prepared per Section VIII, Traffic Signing and Striping Plan of this document, except in those situations where minimal striping changes are required, or as determined by the Public Works Department.

9. **Traffic Signal Poles**

Traffic signal poles designed for 100 MPH wind loading shall be used. Wherever possible, traffic signal poles that will accommodate the ultimate condition shall be installed.

Pole height shall be 30 feet for standards with luminaire.

Type 1A poles shall be spun aluminum except tapered steel Type 1A poles shall be used in high wind areas or when a five-section signal head will be mounted on top.

Poles shall be placed within five feet from the crosswalk or the extension thereof. If this minimum distance cannot be maintained, pedestrian push button posts shall be installed at locations per Figure 4E-2 of CA MUTCD.

Median mounted poles shall not be permitted except for unusual design requirements.

Show pole and equipment schedule, and pole location diagram on plans. Poles shall be placed at least 3' from the curb face.

10. **Mast Arms**

The mast arm length will vary depending on the number, location, and configuration of signal heads to be installed. Wherever possible, the ultimate mast arm shall be installed.

Tenon mounts shall be provided and dimensioned ("F" distance) for any anticipated future signal heads. Unused tenons shall be covered in a waterproof, durable and removable manner.

11. **Traffic Signal Heads**

A minimum of two indications shall be provided for each phase including overlap phases.

Near right heads shall be installed for all Secondary Highways or above, when the distance from the limit line to the related far side mast arm exceeds 120 feet, or as directed by the Public Works Department.

On road curves, visibility of the signal heads for approaching vehicles shall be checked. Additional signal head indication shall be installed at the near left signal pole to mitigate visibility issue.

Signal section housing, backplates and visors shall be metal. Signal section housing for 12" indications shall be used. Backplates shall be louvered. Visors shall be the tunnel type. Terminal compartments shall be provided for all side and top mounted heads.

Programmed visibility (PV) head shall be used only when approved or directed by the Public Works Department. The PV head for protected left-turn phase shall be placed 2' into the extension of the left run lane.

All vehicle indications shall be 12" light emitting diode (LED) signal modules.

Provide a signal head detail on plans if it is not a regular 3-section ball or arrow signal head.

12. **Luminaires**

Luminaires shall be full cut-off flat glass fixtures utilizing 120 Volt, 200-Watt high-pressure sodium vapor bulb or LED as directed by Public Works Department. Lighting calculations are required to insure appropriate lighting levels for crosswalks.

Luminaire mast arms shall be 15 feet unless otherwise noted. Straight luminaire mast arm if required shall be per City Standard No. 1202.

Luminaires shall be placed at each far right approach. Locations shall be coordinated with the street light plans (See Section XI, Street Light Procedure of this document).

Existing street lights which conflict with the traffic signal luminaire shall be identified on the signal and/or street light plans and labeled "To be removed by SCE or serving utility." Arrangements for removal shall be coordinated between the construction inspector and the serving utility.

13. **Internally Illuminated Street Name Signs**

Internally illuminated street name signs (IISNS) shall be LED IISNS per City Specifications.

The IISNS shall be mounted on a 10' straight mast arm that clamps onto signal pole per City Standard No. 1200.

Street addresses and road name suffixes (Ave, St, etc.) shall not be included on IISNS.

Street name legend shall use ClearView or Series E font with 8" upper and 6" lower case, for example, "Van Buren."

14. **Photo-Electric Controls**

Photo-electric control shall be Dual Type V for luminaries and internally illuminated street name signs that conforms to the City Standard No. 1202.

15. **Pedestrian Signal Heads**

Pedestrian signal heads shall be metal type with a polycarbonate eggcrate or Z-crate screen (Type 2). The pedestrian signal face shall utilize a light emitting diode (LED) module.

Far side pedestrian signal heads shall be placed on the same pole as the associated signal head unless otherwise directed.

Near side pedestrian signal heads shall be placed on the Type 1A pole unless otherwise directed.

16. **Push Buttons**

All push buttons shall be Type B, constructed of high density thermoplastic and utilize solid-state Piezo switch technology. Button shall be yellow, outer body color shall be black.

Pedestrian Push Buttons (PPB) shall be ADA compliant and mounted on the traffic signal poles. PPB's shall not be placed further than five feet from the associated crosswalk. PPB posts shall be installed when signal poles cannot be installed within five feet of the associated crosswalk.

Equestrian Push Buttons (EPB) shall be installed per City of Upland general plan designated equestrian trails crossing at a proposed traffic signal location. EPB shall be mounted six feet above finish sidewalk grade and wired with corresponding PPB.

Bicycle Push Buttons (BPB) shall be installed per City of Upland general plan designated bike lanes at a proposed traffic signal location. BPB's shall be mounted four feet above finish sidewalk grade and wired with corresponding PPB.

17. **Pull boxes**

No. 5 pull box (PB) shall be installed unless directed otherwise.

No. 6 PB shall be installed when three or more conduits are installed in the PB.

No. 6E PB (No. 6 PB with extension) shall be installed adjacent to the controller assembly.

No. 5T or 6T traffic bearing type PB shall be installed in unimproved areas not protected by curb or dike.

A PB shall be installed within five feet of each traffic signal and lighting pole but not within one foot of access ramp.

A dedicated PB shall be installed for the left turn lane loops.

Maximum spacing between pull boxes shall be 500 feet.

PB lid for No. 6 PB shall be Christy's Fibrelyte lid or equivalent.

18. **Conduit and Conductors**

All traffic signal conduits shall be rigid galvanized steel.

Non-metal conduit shall not be permitted except for utility service as required by the serving utility company.

All new traffic signal installations shall utilize 12-signal conductor cables (SCC) for vehicle and pedestrian signal runs and 3-SCC for pedestrian push button runs.

Signal modifications may utilize individual conductors if multiple conductors were used.

Conduit sizes shall be determined based on 26% maximum fill for multiple conductors and 40% maximum fill for signal conductor cable.

The following table shows the minimum conduit sizes for the various applications:

Interconnect Only	- 2"
Detector Lead Cable Only	- 1 1/2"
Street Crossings	- 3"
Controller to No. 6E Pull Box	- 2-3.5"
Power Service	- 3"
All Other	- 2"

In numbering conduit runs, it is preferred to label run one furthest from the controller, rise in number to the "home-run" into the controller, and continue to rise from the controller to the last conduit run.

Provide conductor schedule on design plan.

19. **Detectors**

Detector phasing input shall be assigned per Caltrans Standard No. 1203 or 1204.

Detector used shall be video detection per City Specifications or as directed by Public Works Department. Video detection cameras shall be mounted on luminaire mast arms for both advance and presence detections, or on signal mast arms with 6' extension for presence detection only. If advance detection zone is more than 300' from the camera, a second camera mounted on a nearside pole or advance loop detectors shall be installed.

Where the loop detectors will be installed, the existing asphalt concrete must be free from cracks or ruts. If such a condition exists, the existing asphalt concrete and possibly the existing aggregate base material shall be removed and replaced. Location, dimensions, and quantities of asphalt concrete work shall clearly show on the plans. A signal modification plan is required for all changes in loops.

Loop detector's configuration shall be Type E per Caltrans Standard ES-5B.

Loop detectors' spacing shall be per City Standard No. 1201.

20. **Power Source**

The power source shall clearly show on the plans. It shall be the Design Engineer's responsibility to obtain the power location from the serving utility company and provide written documentation to the City during the plan check process.

120/240 Volt dual meter service is required. Both traffic signal and luminaires will have its own meter.

Circuit breakers shall be installed per the current City Specifications.

A three-inch conduit with pull rope shall be designated between the service point and the service equipment enclosure per the serving utility company's requirements.

A ten-foot service conduit riser shall be designated for utility pole service points.

For signal modification projects that relocate service a new service shall be required and the old one to be salvaged.

21. **Service Equipment Enclosure**

The service equipment enclosure shall be Type III-CF per the Caltrans Standard Plans and City Specifications.

It shall be the Design Engineer's responsibility to obtain a service address for the service pedestal.

Service address shall be provided on the traffic signal plan and included on the service equipment enclosure. Contact Planning Department of the City at (909) 931-4132 for an address. The City will apply for service once the address is finalized.

Location of the service equipment enclosure shall be the curb return area closest to the service point unless otherwise required. A minimum of 15 feet shall be maintained between the controller and the service equipment enclosure. A minimum of ten feet shall be maintained between the service equipment enclosure and the power source.

22. **Controller Assembly**

Controller shall be Model 170E controller per City Specifications.

The controller cabinet shall be Type 332, finished with an anodic coating, and the foundation shall extend 4 inches above finish grade. Portland cement concrete sidewalk shall be constructed in front of the controller cabinet per Caltrans detail ES-4B and shown on the street improvement plans.

Controller assemblies shall be installed in the appropriate location per the following guidelines:

- a. Close to the power source.
- b. Not obstructing existing or proposed landscaped corner cutback areas or decorative entry monuments.
- c. Easy access for maintenance personnel with adequate visibility of vehicular movements.
- d. Avoid poor drainage/flooding areas.
- e. Avoid collision hazards.
- f. Avoid obstructing pedestrian/handicap access movement.

23. **GPS Time Source**

A GPS time source/clock shall be installed per City Specifications or as directed by the Public Works Department.

24. **Battery Backup System**

An external mounted Battery Backup system shall be installed per City Specifications or as directed by the Public Works Department.

25. **Phase Diagram**

N.E.M.A. dual-ring type phase diagram shall be shown on traffic signal plan.

Phasing on major street shall be phase two and phase six, and on minor street shall be phase four and phase eight unless otherwise required by the Public Works Department.

For coordination purposes, phasing shall be consistent with existing traffic signals that are within a 1/2-mile radius.

26. **Emergency Vehicle Pre-emption**

Emergency Vehicle Pre-emption (EVP) cable and detector shall be installed for each approach or as directed by the Public Works Department. EVP phase selectors shall be installed in the controller cabinet.

EVP detector mounting detail shall follow City Standard No. 1202.

EVP detector cable shall be indicated in the conductor schedule.

27. **Signal Interconnect**

A separate 2" conduit and No. 5 pull boxes for the signal interconnect only shall be installed between controller assemblies within 1/2-mile radius. Minimum conduit bend radius or sweep shall be 36". All conduit bends shall be galvanized factory bends for rigid steel conduits.

Interconnect cable shall be a minimum of six pair #20 AWG copper conductor per Rural Electrification Administration Specification PE-22 or as directed.

28. **Flashing Beacons**

Flashing beacons with appropriate signing shall be installed when one or more of the following conditions exist as stated in section 4K.102 of CA MUTCD or as directed by the Public Works Department:

- a. At an isolated traffic signal on either a conventional highway or on an expressway in a rural area.

- b. The first traffic signal approaching an urban area.
- c. Any traffic signal with limited approach visibility.
- d. In geographical areas where seasonal conditions; such as, heavy fog, heavy rainfall, and sand storms limit visibility.

On undivided two lane roadways, flashing beacon installations shall be Type 1 with a W3-3 symbol sign per Caltrans Standard Plan ES-7J.

On divided roadways, two Type 1 standards with a W3-3 symbol sign may be installed. One standard will be installed in the median and the other will be installed off the right shoulder.

A Type 9 cantilever flashing beacon per Caltrans Standard Plans ES-7K and ES-7L is the preferred installation for multi-lane roads. The Type 9 flashing beacon shall be installed with fluorescent lighting fixtures and a W3-3 symbol sign.

The standard distance from the flashing beacon to the limit line shall be 750 feet and shall be dimensioned on the plans.

If curved street limits sight of signal head, adjustment or additional heads may be required.

29. **Street Improvements**

No street improvements shall be shown on the traffic signal plans. See street improvement plans for all civil work required.

A construction traffic control plan for the street improvements may be required if one or more of the following situations occurs:

- a. The complexity of the street improvements jeopardizes safety for the construction workers and the traveling public.
- b. The roadway geometrics pose confusion for the traveling public.
- c. The length of time the traveling public will be exposed to the temporary construction exceeds one month.
- d. If required by City or other affected agency for any reasons.

If extensive roadway or drainage improvements are a part of the project, plan and profile street improvement plans shall be prepared. Street improvements shall be constructed per the City of Upland and the State of California Standard Plans and Standard Specifications (See Street Improvement Plan Checklist section of this document for preparation of plans).

Median islands shall provide for WB-50, 60-foot minimum truck turning radius unless otherwise required.

Portland cement concrete sidewalk shall be provided for pedestrian landing pads as shown on the street improvement plans.

30. **Utilities**

It is the Design Engineer's responsibility to contact all utility companies/agencies to obtain existing and proposed overhead and underground facilities. This information shall be shown clearly and accurately on the plans.

The Design Engineer shall identify conflicts between existing utilities and proposed traffic signal equipment on the plans during the design process. The Design Engineer shall provide written documentation for an appropriate solution to the conflicts shall be coordinated with the serving utility company prior to finalizing the design.

Developer shall be responsible for utility clearance for the required traffic signal(s) for development projects.

Traffic signal equipment and overhead power lines shall have minimum 10' radial clearance or more depended upon the power lines' voltage and the serving utility agency.

D. GENERAL NOTES

The following general notes shall be shown on the title sheet:

1. All material and work shall conform to the latest edition of City of Upland Standard Plans, Caltrans Standard Plans and Standard Specifications, and California Manual on Uniform Traffic Control Devices.
2. The Contractor shall notify Underground Service Alert, 811 or (800) 227-2600, and all concerned utility companies at least two working days in advance of excavation.

Locations of all underground utilities are approximate. The Contractor shall determine the exact locations and verify all conditions on the job site prior to commencing work. The Contractor is fully responsible for all damages occurred due to failure to locate and preserve all underground utilities. Hand dig as needed or as directed by the Engineer until clear of obstructions.

3. The Contractor shall be responsible for any clean up on City right-of-way affected by Contractor's work. The Contractor shall keep City right-of-way clean of debris, with dust and other nuisances being controlled at all times. Method of street cleaning shall be dry sweeping of all paved areas. There shall be no stockpiling of construction materials within the City right-of-way without the permission of the Engineer.
4. Existing privately owned improvements on public right-of-way shall be protected or replaced.
5. See Caltrans Standard Plan ES-1A, ES-1B, and ES-1C for symbols and abbreviation legends.

6. The Contractor shall furnish and install all traffic signal equipment's, signs, and striping in accordance with the plans and special provisions. All signs shall be reflectorized and standard size unless otherwise noted.
7. Controller cabinet and service cabinet shall be placed at a minimum of 15 feet apart.
8. Electrical conduit shall be placed at a minimum of 2 feet from telephone conduit.
9. All pull boxes size shall be No. 5 unless otherwise noted or approved by the Engineer. Pull boxes in unimproved areas not protected by curb and gutter shall be traffic bearing type. Maximum spacing between pull boxes shall be 500 feet.
10. All conduits shall be 2-inch rigid galvanized steel conduit unless otherwise noted. All conduits placed under paving shall be installed without open cutting.
11. Detector loops shall be placed per City of Upland Standard Plan No. 1201 and centered within the driving lane unless otherwise noted. Striping layout (Cat-Tracking) shall be approved by the City prior to detector loop installation. All loop detector configurations shall be Type "E" per Standard Plan ES-5B. All curb terminations shall be Type "A" per Standard Plan ES-5D. Detector loop wires shall be tested and approved prior to filling saw cuts.
12. All cables and conductors shall be continuous with a minimum of 6 feet of slack inside each pull box unless otherwise noted. 20 feet of signal interconnect cable slack shall be provided inside the controller cabinet.
13. Traffic signal interconnect cable (SIC) shall be 6-pair, AWG #20 cable unless otherwise noted. Traffic signal interconnect conduit shall have a minimum factory conduit bend radius of 36 inch.
14. All combination pedestrian and vehicle signal indications including PV heads shall utilize light emitting diode (LED) signal modules. All vehicle signal section and indications shall be 12 inch.
15. All signal housings, visors, and backplates shall be metal. Vehicle signal housing shall be provided with louvered backplate. A tunnel visor shall be provided for each signal face.
16. All unused tenons shall be capped in a waterproof method as directed by the Engineer.
17. All equipment locations shall be approved by the Engineer prior to final placement.
18. Plan signature is good for 1 year, additional plan review is required if no construction began by then.

E. ENGINEER'S ESTIMATE

A complete engineer's estimate of construction quantities and costs shall be furnished. If the signal is part of a development with street improvements, the total signal costs should also be shown on the

Construction Cost Worksheet for the street improvements as a single line item with a lump sum amount or with separate line items required for the project.

F. ENVIRONMENTAL CLEARANCE

Environmental clearance shall be obtained for all traffic signal projects. Project conditions shall initiate environmental clearance procedures through the Planning Department.

TS-1

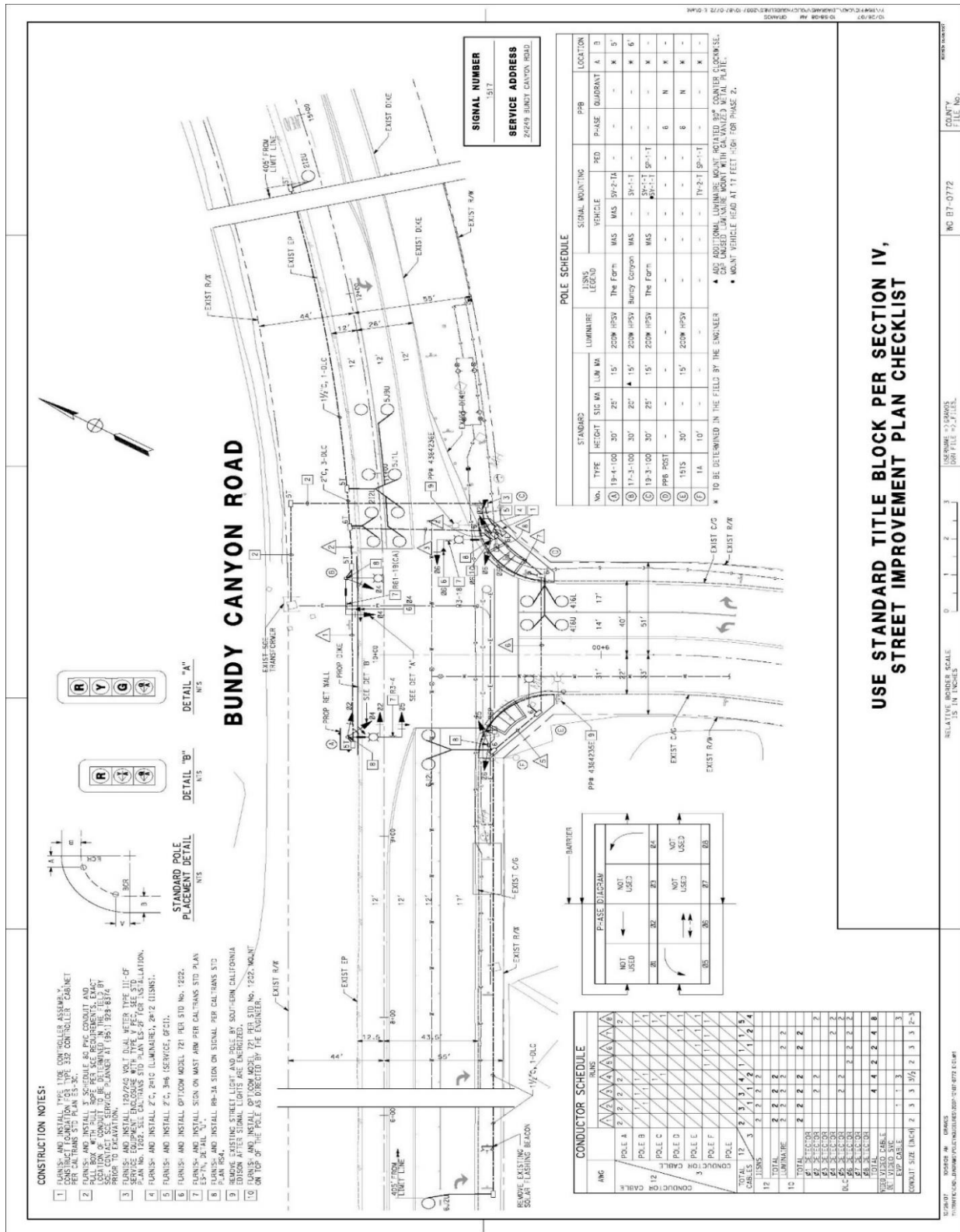
CITY OF UPLAND
PUBLIC WORKS DEPARTMENT

**PREFERED MICROSTATION
LEVELS, COLORS AND PLOTTED LINE WEIGHTS**

TO BE USED FOR ALL DRAWINGS
ELECTRONICALLY SUBMITTED TO THE COUNTY

	COLOR	WEIGHT
LEVEL 1		
TITLE BLOCK	RED	.70mm
EXISTING STREET IMPROVEMENTS	WHITE	.25mm
RIGHT-OF-WAY LINES	RED	.70mm
LEVEL 2		
CONDUCTOR SCHEDULE	BLUE	.35mm
POLE SCHEDULE	BLUE	.35mm
PHASE DIAGRAM	BLUE	.35mm
SENSOR TABLE	BLUE	.35mm
LEVEL 3		
ALL NEW SIGNAL EQUIPMENT	GREEN	.50mm
NEW CONDUIT	GREEN	.50mm
NEW DETECTOR LOOPS	GREEN	.50mm
LEVEL 4		
EXISTING STRIPING, SIGNING AND MARKINGS	BLUE	.35mm
LEVEL 5		
PROPOSED STRIPING, SIGNING AND MARKINGS	GREEN	.35mm
LEVEL 6		
ALL UTILITIES	WHITE	.25mm
LEVEL 7		
TEXT	BLUE	.35mm
DIMENSIONS	BLUE	.35mm
SPECIFIC DETAILS (NORTH ARROW, USA ALERT)	GREEN	.50mm
LEVEL 8		
PROPOSED STREET IMPROVEMENTS	GREEN	.50mm
LEVEL 9		
CENTERLINES	WHITE	.25mm
LEVEL 10		
AREAS FILLED WITH HATCHED LINES	WHITE	.25mm
LEVEL 11		
AREAS CONAING HATCHED LINES	GREEN	.50mm
LEVEL 12		
EXISTING SIGNAL EQUIPMENT	WHITE	.25mm

Exhibit TS-2



XI. STREET LIGHT CRITERIA

In most cases, Southern California Edison (SCE) Company owns the street lights. The developer is responsible for plotting street lights on the street improvement plans using the criteria below. The City will approve the location of the street lights during the plan checking process.

A. GUIDELINES

1. The engineer shall plot all existing street lights, within 300-feet of the project limits, on the street improvement plans.
2. The engineer shall plot all proposed street lights on the street improvement plans
3. All streetlights must be called out with the appropriate construction note. The construction note shall contain information regarding the bulb specifications, pole type, pole height, and length of mast arm. A sample note is shown below.
4. Street lights shall be placed a minimum of 15-feet from all trees.
5. The developer/engineer must submit the approved street light locations to SCE (in a timely manner) to prepare the Lighting Plans. All fees and material costs shall be paid per SCE requirements.
6. Once the appropriate permits have been issued, the contractor shall install the conduit per the approved City street plans and SCE plans.
7. SCE will install cables through the conduit and connect the streetlights
8. The City Inspector will approve the installation of the lights and conduit
9. The City Engineering Division will request SCE to energize the streetlights

B. STREETLIGHT SPACING CRITERIA

The Streetlights will be staggered on each side of the street using the below criteria.

Street Type Width from CF to CF	Light Spacing (In feet)	Light Pole Specifications	Light Specifications	
			Lumens	Watts
Residential Street 36-ft	125' to 130' 150' to 160'	Standard Concrete Pole	4,000 5,800	50 w 70 w
Collector Street 40 ft to 44ft	140' to 150'	Standard Concrete Pole	5,800	70 w
Secondary Highways 64' to 68'	90' to 100'	Standard Concrete Pole	9,500	100 w
Major Highways 68' and above	100' to 125'	Standard Concrete Pole	16,000	150 w
Foothill Boulevard Euclid Avenue**	135' to 150'	Ameron Corsican pole, pole color code 32, globe to be 12% white	Twin King 118	150 w

C. MISCELLANEOUS

Foothill Boulevard, portions of Euclid Avenue: All new lights installed on Foothill Boulevard and portions of Euclid Avenue, will be decorative nostalgic lights. A sample construction note for a Foothill Boulevard light is as follows: "Install Twin King 118, 150 watt LED luminaries on Ameron Corsican Pole; globe will be 12% white, pole color code 32."

Sample street light construction note for standard SCE lights: "Install xx watt LED Street Light on x' mast arm of Standard Concrete Pole".

Upland Town Center: Please contact City Staff.

E. LAFCO APPLICATION

The LAFCO application is necessary in order for the street light energy charges to be paid through community funding. The developer is responsible for the cost of the fixtures, the installation of the conduit, and a deposit for advanced energy charges. At such time as the project is annexed into a CSA (through the application to LAFCO and placed on the City tax rolls) the energy charges are assumed by that CSA at its earliest opportunity allowed by its governing rules and regulations, and the remaining portion of the deposit is returned to the developer.

Please contact the appropriate agency for applications and information:

AGENCY

Local Agency Formation Commission for San Bernardino County
1170 West Third Street, Unit 150
San Bernardino, Ca 92415-0490
(909) 38-0488 - Fax (909) 388-0481

F. OWNERSHIP OF STREET LIGHTS

On public streets in the City of Upland, most street lights that are installed are owned and maintained by the utility purveyor which is the Southern California Edison Company. The Public Works Development Department's functions are to specify the location and type of street lights to be installed and to impose the requirement for street lighting for developments through the Development Conditions of Approval.

SCE addresses is: Southern California Edison Company
 Foothill District
 P.O. Box 788
 Rialto, CA 92376
 (909) 357-6226

Exhibit SL-1

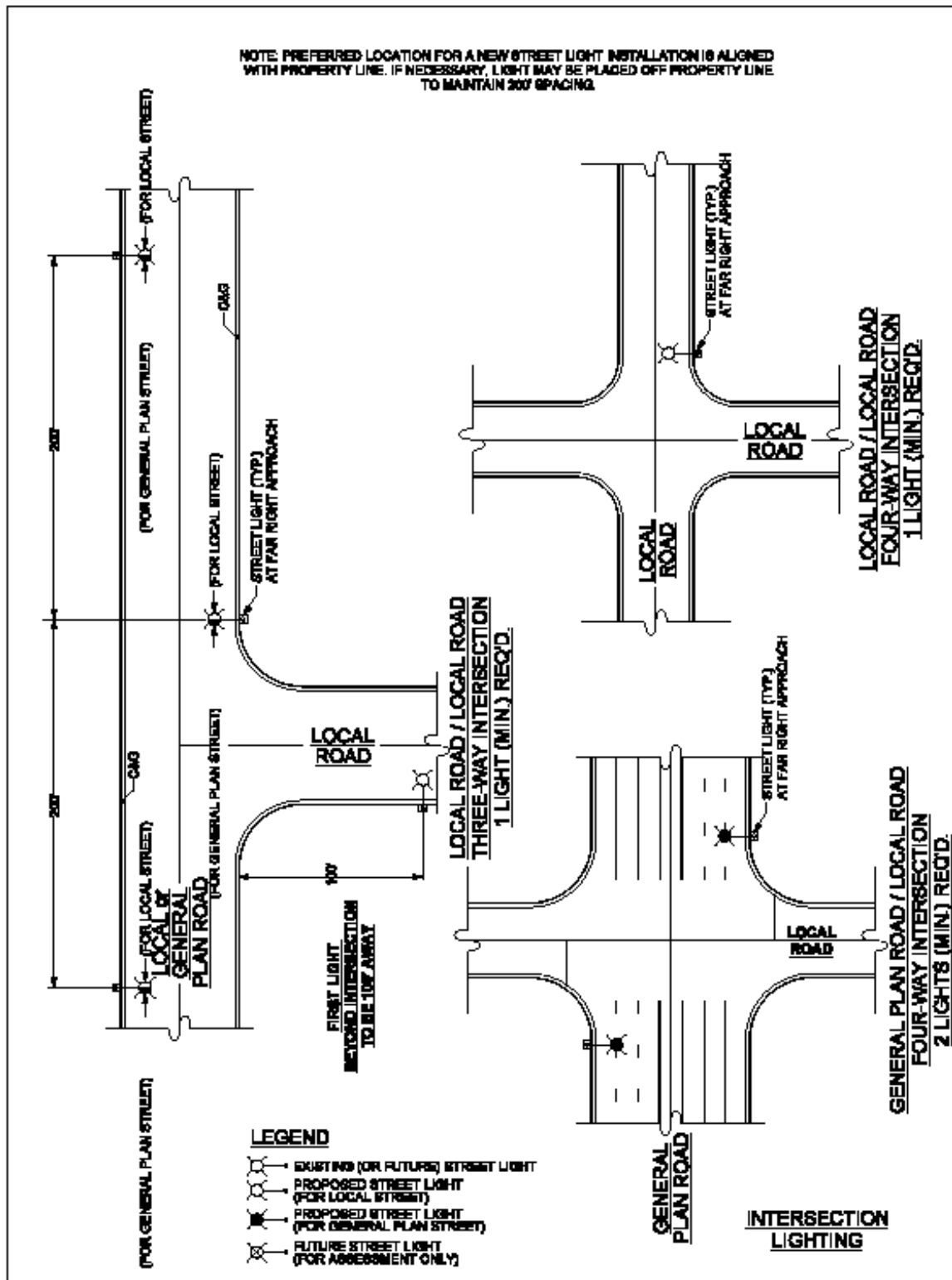
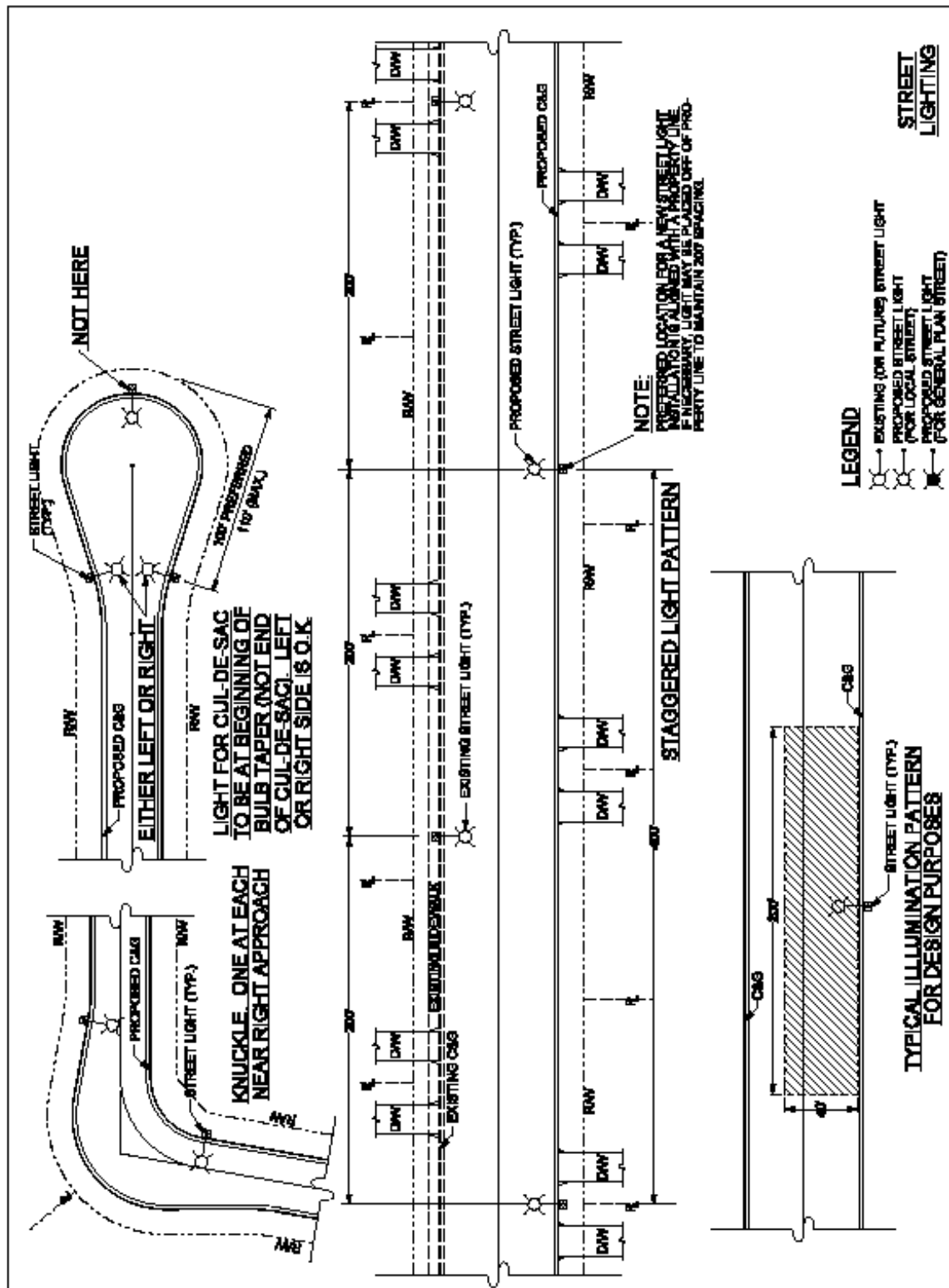


Exhibit SL-2



XII. WATER PLAN CHECK LIST

Project No. _____ Plan No. _____ Checked by: _____

Plan Check Deposit: _____ Receipt Number: _____ Date: _____

A. TITLE SHEET

1. Vicinity Map/North Arrow
2. General notes, list all improvement plans used as a reference in preparation of those plans in the general notes
3. Construction notes with quantity estimate
4. Index Map
5. Legend of symbols and abbreviations
6. City of Upland bench mark and basis of bearing
7. Name/address/phone # of developer/owner and civil engineer
8. Project number and plan number in lower, right corner of plan
9. City approved title/signature block (tract or parcel number, CUP, SP, etc.)
10. Civil engineer's seal and signature
11. Underground alert notice
12. Private engineer's note
13. "Survey Monument" note and "Contractor's Responsibility for Safety" note
14. Review conditions of approval and complete all requirements
15. Check that plan check fees have been paid prior to permit issuance
16. Declaration of Engineer of record.

B. PLAN SHEET

1. Topo shall be shown per City standard
2. Street names shown
3. Stationing to conform to stationing on any existing plans on file. New stationing shall increase west to east or south to north
4. Identical stationing on consecutive sheets
5. Stationing of all street centerlines
6. Station at beginning and at end of improvements and at center of driveways, fire hydrants, blow-offs, services and main line valves
7. North arrow shall be shown pointing up to the right. No exceptions, unless approved by Public Works Director
8. All driveways, sewer mains and laterals must be shown
9. Water easements shown correctly. Water easements shall be located on one lot only.
10. If any area shown is located in the County, it must be labeled. Show City limit lines
11. Existing pipelines, irrigation lines, structures, power poles, or trees, etc., in right-of-way or immediately adjacent to right-of-way must be shown
12. All existing and proposed utilities must be shown, labeled and dimensioned
13. Show existing, proposed and future right-of-way and improvement widths. Should conform to street improvement plan
14. Lot lines, frontage distances and lot numbers same as record map. Label property and map boundary lines
15. Show existing improvements with dashed lines. Proposed improvements with solid lines
16. All drawing references must be noted on plan
17. Show details of all improvements if not City standard. For all standard improvements, show standard drawing number. Check standard drawings for those dimensions to be shown on plans
18. Show existing fire hydrants in vicinity on both sides of the street. Water Division to check locations & size of new fire hydrants. Maximum spacing for fire hydrants is 300' (measured radially). Fire hydrants to be located at a property line where possible.

19. Construction notes shown and numbers checked against indicated improvements
20. All fittings should be labeled and called out
21. Blow-offs required at all dead ends, including temporary dead ends, per City Standards unless system terminates at a fire hydrant
22. Check for minimum separation requirements with all underground utilities per City Std. W.25 and Health Dept. requirements (including proposed sewer, recycled water lines and storm drain lines).

Water Improvement Checklist (Public & Private) (Continued)

23. Check for low or high points in system (including temporary dead ends) which may require air relief valves (for high points), relocation of fire hydrant, or blow-off valve (for low points)
24. "Hot Taps" shall indicate installation and size of tapping valve and tapping sleeve (welded nipple and flange in case of steel mains)
25. Note for restoration of existing pavement
26. Where shut down of existing main is required, add to general notes, "All shut down of existing water mains to be done by and coordinated with the City Water Division. Contractors shall notify all affected water users 72 hours in advance of shutdown"
27. Water mains to be CML&C steel pipe
28. Proposed location of all laterals shall be checked for conflicts with other facilities (i.e. trees, light poles, sewer laterals, driveways, etc.)
29. Water Division to approve the type, size and location of all mainline pipes, valves and laterals (maximum valve spacing is 500')
30. A minimum of 12' paved access shall be required to all public facilities. Access shall be clear of obstructions (including roof overhang)
31. False bottoms to be placed in all sewer manholes located within the construction area.
32. A trap is to be placed in the next downstream sewer manhole from the construction area to trap any construction debris from the site
33. For all industrial or commercial projects, install a new (or upgrade an existing) R. P. backflow device per City Standard W.19.

C. PROFILE

1. Scale, both horizontal and vertical
2. Show 100' stationing at bottom of profile
3. Names and centerline stationing of intersecting streets
4. Label and show connection to existing water, existing elevation and grade. Denote existing elevation and grade with parenthesis
5. Label all profiles
6. Profile of finished centerline surface
7. Water grade correctly shown
8. Label and show stations and elevations at end of water , at crossings and grade breaks
9. Show size and material of water main
10. Show location and bottom or top elevations of all crossings, parallel pipes or structures that might enter into the design of the water main
11. Check that elevations in profile and plan section match
12. Check that profiles and elevations are the same on each sheet or section of match lines
13. Check minimum depth of top water line per City Standard CU-D-7
14. Compare design to existing plans and reference plan numbers on drawing

XIII. SEWER IMPROVEMENT PLAN CHECK LIST (PUBLIC & PRIVATE)

Project No. _____ Plan No. _____ Checked by: _____

Plan Check Deposit: _____ Receipt Number: _____ Date: _____

A. TITLE SHEET

1. Vicinity map with project location and north arrow
2. General notes (also, list all the improvement plans used as reference in preparation of those plans in the general notes)
3. Construction notes with quantity estimate
4. Index map
5. Legend of symbols and abbreviations
6. City of Upland benchmark and basis of bearing
7. Name/address/phone # of developer/owner, civil engineer and soils engineer
8. Project number and plan number in lower, right corner of plan
9. City approved title/signature block (tract or parcel number, CUP, SP, etc.)
10. Civil engineer's seal and signature
11. Underground alert notice
12. Private engineer's note
13. "Survey Monument" note and "Contractor's Responsibility of Safety" note
14. Review conditions of approval and complete all requirements
15. Check that plan check fees have been paid prior to permit issuance
16. Declaration of Engineer of record

B. PLAN SHEET

1. Horizontal (1": 40') and verticals (1":4') minimum scales in plan and profiles sections
2. Bearings of all street centerlines shown
3. Stationing to conform with stationing on any existing plans on file
4. Identical stationing and elevations on consecutive sheets
5. Stationing of structures and BC and EC of all curves
6. Stations at beginning and end of improvements
7. North arrow shall be shown pointing up to the right
8. Show existing topography
9. All plan sheets to have house lateral location (design station and as-built station)
10. Show all water laterals
11. Show all existing pipelines, irrigation lines, structures, power poles, trees, fire hydrants, etc. in right-of-way or immediately adjacent to right-of-way
12. All existing and proposed utilities must be shown, labeled and dimensioned
13. Show existing, proposed and future right-of-way and improvement widths. Should conform to street improvement plan
14. Lot lines, frontage distances and lot #'s same as record map. Label property and map boundary lines
15. Show existing improvements and dimensions with dashed lines
16. All drawing references must be noted on plan
17. Show details of all improvements if not City standards. For all standard improvements, show standard drawing number. Check standard drawings for those dimensions shown on plans
18. Show all manholes to be adjusted to grade
19. Construction notes shown and numbers checked against indicated improvements
20. Street names shown
21. If connecting to an existing sewer, show flow line elev.'s and distance to the nearest manholes (both directions)
22. If sewer is in an easement, show location of easement (do not center on lot lines)

23. Location of new sewer to be at centerline for new streets. Pipe shall be V.C.P. pipe
24. Stationing shall be along true length of sewer , beginning at centerline of lowest manhole and increasing upstream
25. All sewer mains shall be vitrified clay type or C.I.P.

Sewer Improvement Checklist (Public & Private) (Continued)

26. Minimum separation between sewer and water lines shall conform to City standards and State Health Code
27. Minimum 8" public sewers.
28. Laterals are to be extended to the property line and stationed. The minimum slope is 2% with a minimum cover of 4 feet
29. No laterals to be connected to manhole, unless approved by the Public Works Director
30. No laterals directly opposite each other, minimum lateral separation shall be 2 feet
31. For all lateral installations, a cleanout shall be installed at grade level, on private property, just behind the city R.O.W.
32. Manhole or cleanout required at end of all sewers (including temporary terminus)
33. Maximum manhole spacing shall be 350'
34. Maximum distance between manholes and cleanouts shall be 150' with no more than 3 connections
35. Sewers to be constructed to project boundaries within the public right-of-way
36. Sewer laterals to conform with City standards
37. Show detail for re-channelizing bottom of existing manholes where required
38. No vertical curves in sewer, grade breaks only at manholes
39. Where a sewer lateral is the same size as the sewer main , it shall be connected with a manhole
40. Under no circumstances will any sewer be allowed to pass under any buildings or under driveways without prior approval of the Public Works Director
41. Water mains are to be located 6' west of east curb face for north/south streets and 6' north of the south curb face for east west streets
42. Show city limit lines
43. Public sewer pipe to be C.I.P. or V.C.P.
44. Check if backflow device is required (needed if next upstream manhole has a rim elevation greater than the finished floor elevation of the building)
45. A minimum of 12' paved access shall be required to all sewer manholes. Access shall be clear of obstructions (including roof overhang)
46. ¾" plywood false bottoms to be placed in all sewer manholes within the construction area
47. Provide trap at first manhole downstream of proposed improvements.
48. For tracts, show sewer and water as-built table. This table should show the proposed lateral stations and a column for the as-built locations, and a column to reflect when a sewer backflow valve is required. Backflow device is required when downstream manhole elevation is higher than pad elevation.
49. Provide 4 inch bar scale

C. PROFILE

1. Scale both horizontal and vertical
2. Show 100' stationing at bottom of profile
3. Names and centerline stationing of intersecting streets
4. Label and show connection to existing sewer, existing elevation and grade. Denote existing elevation and grade with parenthesis. A note to verify elevation of existing sewer flow line prior to construction
5. Label all profiles
6. Profile of finished centerline surface
7. Sewer grade correctly shown
8. Label and show sta.'s and elev.'s at end of sewer, at crossings, rim and inverts of manholes and cleanouts
9. Show size and material of sewer main
10. Show location and bottom or top elevations of all crossings, parallel pipes or structures that might enter into the design of the sewer
11. Do elevations in profile and plan section match?

12. Are profiles and elevations the same on each sheet or section of match lines?
13. Minimum depth to top of sewer is 6'; minimum pipe cover is 5'
14. Compare design to existing plans. Reference on drawing if they exist.
15. 0.2 foot drop between flow line of inlet and outlet at manholes. Flow line of side inlets shall be 0.3 feet higher than outlet
16. Check sewer profile and grade (Minimum grade 8" = 0.40%, maximum grade = 8%)
17. Design Requirements: sanitary sewers 12" diameter and smaller are normally designed to run half-full (50%) at peak flow. Larger sewers are designed to run 75% full at peak flow
18. Velocity not to exceed 10 ft/s

XIV. PROJECT CLOSURE

For projects that do not require construction, or the required improvements are built, or the applicant does not want to proceed with the project, a request to close the case account shall be sent to the Public Works Department, attention City Engineer, the letter should state the case number, applicant and engineer, and reason for closure. Staff will review and respond to the applicant on the request and if granted, update the project status to withdrawn or “complete”, whichever applies, which closes out the case. The accounting program will close out the account 45 days from the “completed” or “withdrawn” status date. If the case has a positive balance, then a check is issued and sent out within an additional 2 weeks. If the case has a negative balance, a request for additional funds will be sent out and the case remains open until the deposit is made. Once the case has a positive balance, it is closed as stated before.

XV. CALTRANS RIGHT-OF-WAY PROCESING

1 Caltrans Right-Of-Way

Some projects involve work within the state right-of-way, which is the jurisdiction of Caltrans. For projects which have conditions of approval (COA) written. Caltrans will review the plans, but Caltrans will not sign or stamp the plans. Instead, Caltrans will issue an encroachment permit number for the work within their jurisdiction.

For projects with work valued above \$1,000,000 in Caltrans right-of-way, Caltrans sheets will be required.

If there are no Conditions of Approval, the City will not review the plans, only Caltrans will review.

For landscape and street lights, City will take the lead for plan checking within Caltrans right-of-way.

2. Plan Review

It is the responsibility of the applicant to submit plans to both the City for its part and Caltrans simultaneous for review in its right-of-way. On the title sheet of the improvement plans, a note must appear showing:

Caltrans Permit Number _____

This number, issued by the state, must appear by the second plan check received by the City.

3. Caltrans Requirements

Prior to plan approval, C.O.A.'s and letters from Caltrans must be satisfied. Any change, deviation, waiver, addition or deletion of a Caltrans requirement must be done in writing with the signature of a Caltrans member authorized to allow the change. Verbal changes will not be honored, nor letters which are missing the Caltrans letterhead and/or signature.

4. Design Standards

All design items in Caltrans right-of-way shall apply Caltrans standards, unless specifically waived by Caltrans in writing.

Caltrans will review and require pavement sections, curb types and any signs and or striping. If there is a signal involved, it will be reviewed by the maintaining agency.

If the Caltrans standards cannot be adhered to for any reason, the applicant shall follow the Fact Sheet (Design Exception) Procedure for obtaining Caltrans clearance.

APPENDIX

PLANE METHOD CURB RETURN DESIGN	A2
MINIMUM STORM DRAIN EASEMENT TABLE	A3
RECORDING PRIOR TO HAVING SIGNED IMPROVEMENT PLANS	A4
RIGHT OF ENTRY/PERMISSION TO GRADE	A6
AGREEMENT FOR MAINTENANCE OF PARKWAYS (ICI)	A7
CASH-IN LIEU-OF-CONSTRUCTION AGREEMENT	A10
CASH-IN-LIEU OF CONSTRUCTION WORKSHEET	A11
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PLASTIC/METAL PIPE REQUIREMENTS/ CORRUGATED HDPE APPLICATION MATRIX	A14
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CUSTOMER SERVICE QUESTIONNAIRE	A29

PLANE METHOD CURB RETURN DESIGN

Plan Method Curb	IP Number:		Project No:	
Return Design	Checked By:		Date:	
	Approved By:		Sheet No:	

CURB RETURN ELEVATION DATA

PI 1
A
B
G1
G2

CURB RETURN CURVE DATA

Δ in degrees
RADIUS
L
T

ELEVATION AT M.O.C

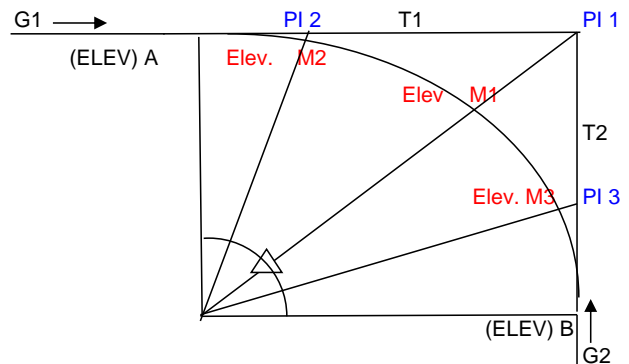
$$\begin{aligned} C1 &= 1/2 (A+B) \\ a1 &= (PI\ 1) - C1 \\ R1 &= \cos 1/2 \Delta (1 + \cos 1/2 \Delta) \\ M1 &= C1 + (R1 * A1) \end{aligned}$$

ELEVATION AT 1/4 POINT

$$\begin{aligned} T2 &= (RADIUS) * (\tan 1/4 \Delta) \\ PI\ 2 &= A + (T2 * G1) \\ C2 &= 1/2 (A + M1) \\ a2 &= PI2 - C2 \\ R2 &= \cos 1/4 \Delta (1 + \cos 1/4 \Delta) \\ M2 &= C2 + (R2 * a2) \end{aligned}$$

ELEVATION AT 1/4 POINT

$$\begin{aligned} PI\ 3 &= B + [T2 * (-G2)] \\ C3 &= 1/2 (B + M1) \\ a3 &= (PI\ 3) - C3 \\ M3 &= C3 + (R2 * a3) \end{aligned}$$



CITY OF UPLAND PUBLIC WORKS DEPARTMENT

MINIMUM STORM DRAIN EASEMENT TABLE

Diameter	(Sloped)						(Shored)								
	2'	3'	4'	5'	6'	7'	8'	9'	10'	12'	14'	16'	18'	22'	24'
18"	20'	20'	20'	20'	20'	20'	20'	20'	20'	22'	22'	24'	25'	28'	28'
21"	20'	20'	20'	20'	20'	20'	20'	20'	20'	22'	24'	24'	25'	28'	28'
24"	20'	20'	20'	20'	20'	20'	20'	20'	22'	22'	24'	24'	25'	28'	30'
27"	20'	20'	20'	20'	20'	20'	20'	22'	22'	22'	24'	25'	26'	28'	30'
30"	20'	20'	20'	20'	20'	20'	20'	22'	22'	24'	24'	25'	26'	28'	30'
33"	20'	20'	20'	20'	20'	20'	22'	22'	22'	24'	24'	26'	28'	30'	30'
36"	20'	20'	20'	20'	20'	22'	22'	22'	22'	24'	24'	26'	28'	30'	30'
39"	20'	20'	20'	20'	22'	22'	22'	22'	24'	24'	25'	26'	28'	30'	32'
42"	20'	20'	20'	22'	22'	22'	22'	24'	24'	24'	26'	28'	28'	30'	32'
45"	20'	20'	20'	22'	22'	22'	24'	24'	24'	25'	26'	28'	28'	30'	32'
48"	20'	20'	20'	22'	22'	22'	24'	24'	24'	25'	26'	28'	28'	32'	32'
51"	20'	20'	20'	22'	22'	24'	24'	24'	25'	26'	28'	28'	30'	32'	32'
54"	20'	20'	22'	22'	24'	24'	24'	25'	25'	26'	28'	28'	30'	32'	32'
57"	20'	20'	22'	24'	24'	24'	25'	25'	26'	26'	28'	30'	30'	32'	34'
60"	20'	20'	24'	24'	24'	24'	25'	25'	26'	28'	28'	30'	30'	32'	34'
63"	20'	20'	24'	24'	24'	24'	25'	26'	26'	28'	28'	30'	30'	34'	34'
66"	20'	20'	24'	24'	24'	25'	25'	26'	28'	28'	30'	30'	32'	34'	34'
69"	20'	20'	24'	24'	25'	25'	26'	26'	28'	28'	30'	30'	32'	34'	35'
72"	20'	24'	24'	25'	25'	26'	26'	28'	28'	28'	30'	32'	32'	34'	35'
75"	24'	24'	24'	25'	26'	26'	28'	28'	28'	30'	30'	32'	32'	34'	35'
78"	24'	24'	25'	25'	26'	26'	28'	28'	28'	30'	30'	32'	32'	35'	36'
81"	24'	25'	25'	26'	26'	28'	28'	28'	28'	30'	32'	32'	34'	35'	36'
84"	25'	25'	26'	26'	28'	28'	28'	28'	30'	30'	32'	32'	34'	35'	36'
90"	25'	26'	26'	28'	28'	28'	30'	30'	30'	32'	32'	34'	34'	36'	38'
96"	26'	28'	28'	28'	28'	30'	30'	30'	30'	32'	34'	34'	35'	38'	38'
102"	28'	28'	28'	28'	30'	30'	30'	32'	32'	32'	34'	34'	36'	38'	40'
108"	28'	28'	30'	30'	30'	30'	32'	32'	32'	34'	34'	35'	36'	38'	40'
120"	28'	30'	30'	30'	30'	30'	32'	32'	34'	35'	36'	38'	38'	40'	42'

RECORDING PRIOR TO HAVING SIGNED IMPROVEMENT PLANS

(DEVELOPER LETTERHEAD)

Date_____

Principal Engineer
Public Works Department
City of Upland
460 North Euclid Ave.
Upland, CA 91786

RE: Request for recordation prior to having signed plans

Project No._____ Permit No._____

Location_____

Dear Sir or Madam:

We are the developers of the above project and we request to record this map prior to having signed improvement plans by posting a bond in the amount of 120% (including Flood Control, if applicable) as allowed by Ordinance.

Improvement plans are going through the plan check process and they are at a stage where the design concept and quantities are acceptable. The plan checker for this project is _____. We commit to continue the plan check process to final approval and signature.

We understand also that if any offsite easements or dedications are required they will be obtained and recorded prior to and/or concurrent with map recordation and the inspection deposit is required prior to recordation.

Our urgent reason and justification for this request is_____

_____.

A copy of this letter is sent to the Water Department and the Community Facility District (if applicable) listed below requesting their clearance. Once we receive their clearance, we will transmit this clearance and the final 120% cost estimate to process for bonding. When the bonds are approved by City Council, at that time Public Works Department will clear the map to record.

The Water Department / Agency could sign their clearance on the attached, or if the water and sewer plans are signed by them, that will suffice as clearance.

Plans for all facilities to be annexed by CFD need to have been plan checked one time.

Sincerely,

Developer' s Name (Printed)

Signature

Date

cc: Water Department
Flood Control District
Fire Department
Environmental
Landscape and Lighting Maintenance District

[] Clearance

[] Objection because _____.

District / Agency

Name (Printed)

Signature

Date

RIGHT OF ENTRY/PERMISSION TO GRADE

I/We, _____, the undersigned, hereby state that I/We am/are the legal owners (s) of the property located at _____, (property address) within Section _____, Township _____, Range _____, having the legal description of _____

_____ and/or assessor's parcel number of _____.

I/We also state that I/we have seen and received a copy of the construction drawings for _____, which propose construction on said property consisting of:

- 1) Roadway grading cut and fill slopes (and graded/concrete swales, if any); and,
- 2) Drainage improvements including culverts, rip rap and related grading.

The proposed construction has been shown on the construction drawings, dated _____ and it was explained to me/us.

I/We hereby give my/our consent and permission for the right of entry onto the above-identified property to perform the above stated construction.

This permission shall continue in force only until the above-described work has been completed and a Notice of Completion is issued on this project. It is expressly understood that upon completion of the work, this Right of Entry is terminated and said property will be left in a neat and orderly condition.

I/We hereby give my/our consent also that I/we will not at any time block or divert any drainage into or out of the proposed drainage facility as shown on the plans.

I/We hereby indemnify and hold harmless the City from claims or liabilities arising out of actions from this agreement.

Signed: _____ Date: _____

(Affix notary)

AGREEMENT FOR MAINTENANCE OF PARKWAYS (ICI)

FOR INDIVIDUAL COMMERCIAL/INDUSTRIAL PROPERTIES

Case Number _____

Tracking Number _____

_____, ("OWNER")
and the CITY OF UPLAND ("CITY") enter into the following agreement.

RECITALS

_____ is the owner and developer of that property tentatively designated and named the _____, which is more particularly described in Exhibit "A" attached hereto; and which has the following legal description:

WHEREAS, certain parkways belonging to the City are located contiguous to or within said property, which parkways are solely and more particularly described in Exhibit "A" attached hereto ("Parkways"); and

WHEREAS, the OWNER desires to improve such Parkways as a method of enhancing the value of the property; and

WHEREAS, the OWNER and the CITY wish to establish an agreement respecting the permanent maintenance of such Parkways;

THEREFORE, upon the mutual promises of the parties and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows:

1. Duties of the OWNER. _____ shall improve the Parkways by landscaping the Parkways in a clean and attractive manner and shall install an irrigation system for the purposes of watering such Parkways. The OWNER shall obtain the approval of the Director of Public Works of the landscaping plan and the irrigation system prior to installation thereof. Following the completion of the installation of the landscaping and the installation of the irrigation system, OWNER shall maintain the Parkways in a clean and attractive condition. The costs and expenses involved in the installation of the landscaping and irrigation system and the costs and

expenses of maintaining the Parkways shall be borne entirely by OWNER with no cost or expense to the CITY.

2. Liability for Negligence. OWNER agrees to indemnify, defend and save the CITY, its authorized agents, officers, representative and employees, harmless from and against any and all penalties, liabilities or loss resulting from claims or court action and arising out of any accident, loss or damage to persons or property happening or occurring as a proximate result of any work undertaken pursuant to this Agreement, including any allegation that the landscaping caused, or contributed to causing, death or injury to person or property.

3. Covenant to Cooperate. OWNER covenants that it shall cooperate with the CITY should CITY determine that it is necessary, at a later time, to perform any work in the Parkways. This covenant of cooperation includes but is not limited to removing or relocating, at CITY option, all or part of the landscaping and/or the irrigation system for the purpose of accommodating the construction.

4. City Ordinance. _____ and the CITY acknowledge that City Ordinance, as amended from time to time (the "Ordinance") has been promulgated by the CITY and that such Ordinance creates certain restrictions and responsibilities upon those seeking an encroachment permit. The parties hereby incorporate the terms and provisions of such Ordinance by this reference herein the same as if set forth in its entirety. _____ shall obtain all permits required by Ordinance prior to commencing any work within the right of way.

5. Amendments. Any amendments to this Agreement shall be made only by the written approval of both of the parties hereto.

6. California Law. It is the intention of the parties that the laws of the State of California govern the validity of this Agreement, the construction of its terms and the interpretation of the rights and duties of the parties.

7. Parties in Interest. Each and all of the covenants, terms, provisions, and agreements herein contained shall be binding upon and inure to the benefit of the heirs, executors, administrators, successors, and assigns of the respective parties hereto.

8. Integrated Agreement. This agreement constitutes the entire understanding and agreement between the parties hereto with respect to the subject matter hereof, and there are no agreements, undertakings, restrictions, or warranties among the parties other than those set forth herein and herein provided for.

DATED: _____,

DATE

CITY OF UPLAND

City Manager

ATTEST

PROPERTY OWNER

Company/Corporation/Partnership (Name)

NAME

Print Name (Developer/Representative)

Date

Print Title of Signee

DATE: _____

RECORD OWNERS (MUST BE NOTARIZED)

BY _____

CASH-IN LIEU-OF-CONSTRUCTION AGREEMENT

AND TRACKING SHEET

Developer Name: _____ Date: _____

Address: _____

Project Number: _____

Tract: _____ Parcel Map: _____

Plot Plan: _____ Public Use: _____

Conditional Use: _____ Miscellaneous: _____

* Type of Improvement:

☐ 1. Raised Median and Median Landscaping including _____

☐ 2. Road Improvements including _____

☐ 3. Other Improvements _____

* Please check applicable improvements cash is for and list major items.

Street Name cash is for _____

Limits along street cash is for: Sta / Cross Street _____ to Sta / Cross Street _____

Road Width _____ (Ft) Median Width _____ (Ft) Per Exhibit

Amount: \$ _____

AGREEMENT

_____ hereby makes a payment to the City of Upland in the amount of \$_____ and agrees that this money is provided as Cash-In-Lieu-Of-Construction to meet the obligation of Project _____ per the approved Conditions of Approval. This agreement is provided, as the required facility is not yet feasible to be constructed. It is further agreed that the City reserves the right to spend this money for any similar improvements on a City-wide basis, and that at the point of feasibility for this required facility to be built, the City will use these funds on the designated construction.

Developer Signature: _____ City Signature: _____

Name: _____ Receipt Number: _____ Dated: _____

Title: _____ Receipt Description: _____

Cc: Finance

File

CASH-IN-LIEU OF CONSTRUCTION WORKSHEET

For Future Medians Only, use the Construction Worksheet for all other items.

QTY	UNIT	ITEM	UNIT COST	AMOUNT
	LF	A-8 curb	\$12.00	
	SF	Maintenance Walk Std. 113	\$4.00	
	SY	Remove AC pavement	\$0.60	
	SF	Landscape & Irrigation	\$3.50	
	SF	Colored Stamped Concrete	\$10.00	
	LF	Saw cut exist AC pavement	\$1.00	
	SF	Full Depth AC (2' beyond lip)	\$6.50	
	LF	Water Meter (a)	\$1.30	
	LF	Electric Meter (b)	\$2.00	
	CYD	Landscape Fill Material (c)	\$27.00	
	EA	Street Trees (15 gal)	\$100.00	
			Sub	
		Inspection (3%)		
			Sub	
		Survey & staking (3%)		
			Sub	
		Design (15%)		
			Sub	
		Contingencies (20%)		

TOTAL

- (a) \$7,000 meter one per mile
(b) \$10,000 meter one per mile
(c) 9'x1'x2' = 18 cuft

CAST-IN-PLACE STORM DRAIN PIPE REQUIREMENTS

1. Revised hydraulic calculations, reflecting 0.014 for the pipe roughness.
2. Soils report addressing the feasibility of using Cast-in-place pipe including:
 - Trench wall stability
 - Existence of groundwater
 - Existence of expansive soils
 - Recommendation for using cast-in-place pipe
3. Structural calculations are only required if the fill over the pipe is less than three feet or greater than the recommended height from table 2.3 in the ACI 346-90.
4. Also see the cast-in-place design standards by SB County Flood Control for additional information and construction specifications.
5. A note on the cover sheet of the plans stating that the pipe shall be inspected and certified by a qualified inspector. A certification shall be given to Construction Inspection on the quality of the finished pipe. Video inspection may be required by Construction Inspection.

STRUCTURAL SECTION CALCULATION SHEET

ASPHALT CONCRETE THICKNESS GRAVEL EQUIVALENT METHOD (Revision 2006)

Project Number: _____ Date: _____

Traffic Index (TI) 5.5 Street Name: _____

1 Thickness of AC Required

Aggregate Base "R" Value (Default) 78
 GE for AC ($GE=0.0032 \cdot TI(100-R)$) 0.39
 IF TI GREATER OR EQUAL 6.5 ADD 0.20 SAFETY FACTOR 0.2
 TOTAL GE FOR ASPHALT CONCRETE 0.59

GRAVEL FACTOR (GF) FOR AC:

TI	GF	MIN AC
5.0 & BELOW	2.5	0.25'
5.5 TO 6.0	2.32	0.25', 0.25'
6.5 TO 7.0	2.14	0.30', 0.33
7.5 TO 8.0	2.01	0.36', 0.39
8.5 TO 9.0	1.89	0.43', 0.46
9.5 TO 10.0	1.79	0.49', 0.51
10.5 TO 11.0	1.71	0.55', 0.57
11.5 TO 12.0	1.64	0.62', 0.64

GF = 2.32

= 0.25 AC

Note: If it is less than min. use min thickness

= 0 AC

THICKNESS AC=(GE/GF)

(USE MIN THICKNESS PER SPECIFICATIONS
SECTION 8.07 OF ORDINANCE 461)

2 Thickness of Aggregate Base Required

SOIL "R" Value 50
 GE for AB ($GE=0.0032 \cdot TI(100-R)$) 0.88
 Deduct GE furnished by AC
 GF(AC) x AC Thickness (0.59) 0.00
 Net GE required for AB 0.29 0.88
 GF for Aggregate Base (Default) 1.11
 Thickness of AB required (GE/GF) = 0.26 0.79

Use (0.50' minimum) if your answer is less than minimum

Y:\Plan Check\Policies&Guidelines\AC & AB Thickness R

PLASTIC/METAL PIPE / CORRUGATED HDPE REQUIREMENT APPLICATION MATRIX

1. Culverts only, no connections to catch basins and no alignments parallel to centerline; should be single line crossing under roadway.
2. Must have six feet of cover or more, shallow pipe tends to get cut up by others. If less than 6' a concrete blanket is required per APWA Standard 225-0
3. Thickness per IV-J.
4. Allowable materials are HDPE, PVC and Steel.
5. All pipe to be smooth interior and ribbed or corrugated exterior.
6. Structural calculations for required strength shall be provided.
7. Standard specifications for pipe material, installation, and testing are per Ordinance.

CORRUGATED HDPE APPLICATION MATRIX

APPLICATION	Minimum Cover (ft) ^{1,2}	Maximum Cover (ft) ¹	Embedment Material	Compaction Level (% RC)	Compaction Equipment	Joint Type	Post Installation Inspection	Compaction Testing	Radius Curves	High Ground Water	Design Service Life (years)
NEW DEVELOPMENT											
PUBLIC WORKS											
INSIDE ROW – NO TRAFFIC	6	20	N	95	M	WT	TV	Y	Y	Y	100
INSIDE ROW – TRAFFIC	6	20	R	95	M	WT	M	Y	Y	Y	100
OUTSIDE ROW – NO TRAFFIC	6	20	N	95	M	WT	V	Y	Y	N	100
OUTSIDE ROW – TRAFFIC	6	20	R/S	95	M	WT	V	Y	Y	Y	100

1 = Based on Caltrans Design Manual Section 850

2 = Minimum cover under traffic loading is defined as from top of pipe to bottom of flexible pavement and/or from top of pipe to top of rigid pavement.

3 = Minimum 4" concrete CAP per APWA Standard 225-0 required for less than 6' cover.

ST = Silt tight

V = Visual Inspection

TV = CCTV Inspection

M = Mandrel to 7.5% Based ID

Y = Yes

N = No

CASH PAYMENT FOR DRAINAGE FACILITIES MAINTENANCE

Agreement & Tracking Sheet

Developer Name & Address: _____

Date: _____

Project Number:

Tract: _____ Parcel Map: _____

Plot Plan: _____ Public Use: _____

Conditional Use: _____ Miscellaneous: _____

Type of Facility: _____

Amount: _____ \$ _____

Agreement

_____ hereby makes a payment to the City of Upland in the amount of \$ _____ (typically 2% of construction and a \$5,000.00 minimum) and agrees that this money is provided as cash payment for drainage facilities maintenance to meet the obligation of the Project _____ per the approved Conditions Of Approval. It is further agreed that the City reserves the right to spend this money for any similar facilities maintenance on a City-wide basis.

Developer Signature: _____

Title: _____

Print Name: _____

City Signature: _____

Receipt Number: _____ Dated: _____

cc: File

STORMWATER MANAGEMENT/BMP FACILITIES AGREEMENT

Recorded at the request of:
CITY OF UPLAND
PUBLIC WORKS DEPARTMENT

THIS INSTRUMENT IS FOR THE BENEFIT
OF THE CITY OF UPLAND AND
ENTITLED TO BE RECORDED WITHOUT
FEE.(GOV. CODE 6103)

RETURN TO:
City of UPLAND
PUBLIC WORKS DEPARTMENT
460 North Euclid Ave.
UPLAND, CA 91786

**COVENANT AND AGREEMENT REGARDING WATER QUALITY
MANAGEMENT PLAN BMP, CONSENT TO INSPECT, MAINTENANCE AND
INDEMNIFICATION**

APN: _____ PROJECT No. _____ IP No. _____

OWNER(S): _____

PROPERTY ADDRESS: _____

LEGAL DESCRIPTION: _____

THIS **AGREEMENT** is made and entered into in City of Upland, California, this _____ day of _____ Year _____, by and between _____, (hereinafter referred to as "Covenantor" or "Owner") and the CITY OF UPLAND via its Department of Public Works, a political subdivision of the State of California (hereinafter referred to as "City").

RECITALS

WHEREAS, the Covenantor owns real property ("Property") in the City of Upland, State of California, more specifically described in Exhibit "A" and depicted in Exhibit "B", each of these exhibits is attached, and incorporated herein by this reference;

WHEREAS, the City is the owner of interests in that certain real property within the unincorporated area of the City of Upland, State of California, containing storm drains, pipelines, and related appurtenances constituting the City's municipal separate storm sewer system (the City's "MS4");

WHEREAS, Covenantor intends to develop, improve, and/or use the Property in such a way that approval by the City for such development, improvement, and/or use is required pursuant to applicable laws;

WHEREAS, As a condition for said approval by the City, City required Covenantor, and Covenantor desires to, restrict the use of the Property according to the conditions, covenants, equitable servitudes, and restrictions contained herein for the express benefit of the City's MS4, which include requirements that the Property incorporate post construction on-site stormwater quality control measures;

WHEREAS, the Covenantor/Owner has chosen to install one or more _____, hereinafter referred to as "Device", as the on-site control measure to minimize pollutants in urban runoff;

WHEREAS, said Device has been installed in accordance with plans and specifications accepted by the City;

WHEREAS, said Device, with installation on private property and draining only private property, is a private facility with all maintenance or replacement, therefore, the sole responsibility of the Covenantor/Owner in accordance with the terms of this Agreement;

WHEREAS, the Covenantor/Owner is aware that periodic and continuous maintenance, including, but not necessarily limited to, filter material replacement and sediment removal, is required to assure peak performance of Device and that, furthermore, such maintenance activity will require compliance with all Local, State, or Federal laws and regulations, including those pertaining; to confined space and waste disposal methods, in effect at the time such maintenance occurs;

NOW THEREFORE, incorporating the foregoing Recitals and in consideration of the covenants and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and expressly for the benefit of, and to bind, their successors in interest, the parties hereto agree as follows:

1. Covenantor/Owner hereby provides the City or City's designee complete access to the Device and its immediate vicinity and such access onto the property to permit access to the device at any time, upon twenty-four (24) hour advance notice in writing, of any duration for the purpose of inspection, sampling and testing of the Device. City

shall make every effort at all times to minimize or avoid interference with Owner's use of the Property.

2. Covenantor/Owner shall use its best efforts diligently to maintain the Device in a manner assuring peak performance at all times. All reasonable precautions shall be exercised by Owner and Owner's representative or contractor in the removal and extraction of material(s) from the Device and the ultimate disposal of the material(s) in a manner consistent with all relevant laws and regulations in effect at the time. As may be requested from time to time by the City / Regional Water Quality Control Board (RWQCB), the Owner shall provide the RWQCB with documentation identifying the material(s) removed, the quantity, and disposal destination.
3. In the event Covenantor/Owner, or its successors or assigns, fails to accomplish the necessary maintenance contemplated by this Agreement, within five (5) days of being given written notice by the City, the City is hereby authorized to cause any maintenance necessary to be done and charge the entire cost and expense to the Owner or Owner's successors or assigns, including administrative costs and interest thereon at the maximum rate authorized by the Civil Code from the date of notice of expense until paid in full.
4. The City may require the Covenantor/Owner to post security in a form and for a time period satisfactory to the City to guarantee the performance of the obligations stated herein. Should the Owner fail to perform the obligations under this Agreement, the City may, in the case of a cash deposit, certificate of deposit or letter of credit, act for the Owner using the proceeds from it, or in the case of a surety bond, require the sureties to perform the obligations of the Agreement.
5. The City may, but shall not be obligated to, enforce this Agreement by a proceeding at law or in equity against any person or persons violating or attempting to violate any condition, covenant, equitable servitude, or restriction provided for herein, either to restrain such violation or to recover damages.
6. This Agreement constitutes the entire agreement and understanding between the parties with respect to the subject matter of this Agreement and supersedes all prior or contemporaneous agreements and understandings with respect to the subject matter hereof, whether oral or written.
7. If any part of this Agreement is declared by a final decision of a court of competent jurisdiction to be invalid for any reason, such shall not affect the validity of the rest of the Agreement. The other parts of this Agreement shall remain in effect as if this Agreement had been executed without the invalid part(s). The parties declare that they intend and desire that the remaining parts of this Agreement continue to be effective without any part(s) that have been declared invalid.

- 8.** This Agreement may be executed in counterparts, each of which so executed shall, irrespective of the date of its execution and delivery, be deemed an original, and all such counterparts together shall constitute one and the same instrument.
- 9.** This Agreement shall be recorded in the Office of the Recorder of San Bernardino, California and shall constitute notice to all successors and assigns of the title to said Property of the obligation herein set forth.
- 10.** In the event of legal action occasioned by any default or action of the Covenantor/Owner, or its successors or assigns, then the Covenantor/Owner and its successors or assigns agree(s) to pay all costs incurred by the City in enforcing the terms of this Agreement, including reasonable attorney's fees and costs, and that the same shall become a part of the lien against said Property.
- 11.** Covenantor/Owner agrees to indemnify, defend, and hold harmless the City, its elected officers, employees, agents, and contractors from and against any and all liability, expense, including costs and reasonable legal fees, and claims of damage of any nature whatsoever including, but not limited to, death, bodily injury, personal injury, or property damage arising from or connected with the City inspection of the Property except where such liability, expense, or claim for damage results from the sole negligence or willful misconduct of the City.
- 12.** It is the intent of the parties hereto that burdens and benefits herein undertaken shall constitute covenants that run with said Property and constitute a lien thereon against.
- 13.** The obligations herein undertaken shall be binding upon the heirs, successors, executors, administrators and assigns of the parties hereto and any other present or future interest holders or estate holders in the property. The term "Owner" shall include not only the present Owner, but also its heirs, successors in interest and in title to the property, executors, administrators, and assigns. Owner shall notify any successor to title of all or part of the Property about the existence of this Agreement. Owner shall provide such notice prior to such successor obtaining an interest in all or part of the Property. Owner shall provide a copy of such notice to the City at the same time such notice is provided to the successor.
- 14.** Time is of the essence in the performance of this Agreement.
- 15.** Any notice to a party required or called for in this Agreement shall be served in person, or by deposit in the U.S. Mail, first class postage prepaid, to the address set forth below. Notice(s) shall be deemed effective upon receipt, or seventy-two (72) hours after deposit in the U.S. Mail, whichever is earlier. A party may change a notice address only by providing written notice thereof to the other party.

CITY:

COVENANTOR/OWNER:

City of Upland Department of Public Works
Attn: Public Works Director
460 North Euclid Ave.
Upland, CA 91786

**CITY OF UPLAND
PUBLIC WORKS DEPARTMENT**

COVENANTOR/OWNER

City Manager

Date

Company/Corporation/Partnership

(Attest)

Date

(Print Title)

DATE: _____

RECORD OWNERS (MUST BE
NOTARIZED)

EXHIBIT STANDARDS

BMP EXHIBIT "A" STANDARDS

1. Use the legal description of the parcel as shown on the tentative exhibit. If not available, use the one in the most current title report.
2. As a backup, if the project is a map the description of the future lot may be included for reference

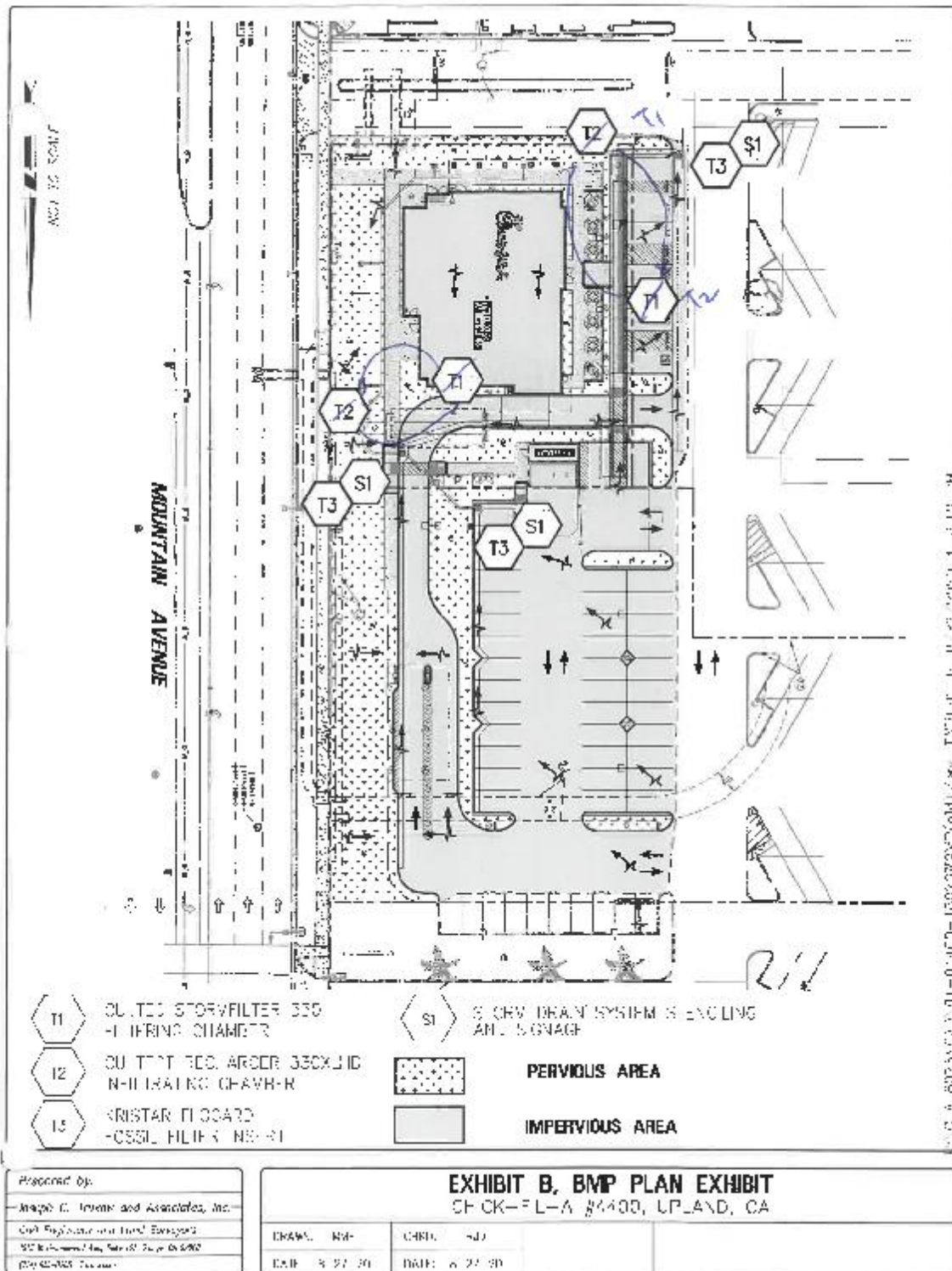
BMP EXHIBIT "B" STANDARDS

1. 0.12" minimum lettering
2. Sheet size must be 8.5" x 11"
3. Show Street names, north arrow
4. Indicate point of flow exit into street if basin system fails
5. Indicate Q100 of flow exit into street
6. Indicate direction of flow exit into street
7. Indicate by notation and/or show nearest downstream drainage facility (catch basin, culvert, riser, etc.)
8. Show "Exhibit A", project number (TR, PM, PUP, PP etc.)
9. Title block, signature block, engineer seals, USA note is not necessary on Exhibit
10. Show scale used for drawing, provide 4" graphic scale

LANDSCAPE EXHIBIT "B" STANDARDS

1. 0.12" minimum lettering
2. Sheet size must be 8.5" x 11"
3. Show street names, north arrow
4. Show "Exhibit A", project number (TR, PM, PUP, PP etc.)
5. Title block, signature block, engineer seals, USA note is not necessary on Exhibit
6. Show scale used for drawing, provide 4" graphic scale

BMP EXHIBIT B EXAMPLE



JOINT USE AGREEMENTS

Purpose:

Joint use agreement (JUA) is an agreement concept typically utilized by the Southern California Edison Company.

The basic purpose of the agreement is to perpetuate the superior rights of the Edison Company when a public works project requires that Edison Company facilities (usually power poles) be relocated from an easement position to a franchise position.

Procedures:

1. Determine if the Edison Company does actually have superior property rights with respect to the Edison Company's facilities, which must be relocated.

- a. Require that evidence be submitted as evidence of Edison's prior rights. A written claim letter by the Edison Company is also a good idea to ensure that the owner communicates their claim of prior and superior rights accurately.
- b. An exhibit should be prepared to assist the City Surveyor in reviewing the claim of prior rights. The exhibit should show the location of the facilities to be relocated and existing right of way. For City projects, this usually consists of the City's preliminary plans, with the locations of the facilities highlighted.

In the case of a development project, the developer's engineer should be required to submit a more detailed exhibit which shows the location of the facilities to be relocated, existing and proposed right of way, the Edison Company easement(s), and dedication dates with instrument numbers.

- c. Submit request to the Survey Division for review of the claim of prior rights. It should never be assumed that the Edison Company is correct in their claim. The Survey Division will review the claim, and provide a written opinion, with copies of supporting documents.
2. Respond to the Edison Company appropriately
 - a. If we disagree with the claim, send Edison Company a letter including supporting documents and the Survey Division memo.
 - b. If we agree with the claim, and it is necessary for the facilities to be relocated from Edison easement onto road right of way (franchise), it is appropriate to initiate the Joint Use Agreement procedures.

3. Prepare Legal Description and Plat of Joint Use Area

The Joint Use Agreement will reference a legal description and plat of the "Joint Use Area" This must be prepared by either Survey or the Developer's surveyor or engineer, as appropriate. The Joint Use Area legal and plat must show the area of the public right of way where the Edison Company's facilities are to be installed, and the width of the original easement. Typical width is 30 feet. The Joint Use Area legal and plat must be reviewed and approved by both Edison and City for appropriateness.

4. Prepare and execute Joint Use Agreement

- a. The Edison Company will prepare the actual agreement, using their standard language, which has previously been reviewed by City Counsel. Each specific agreement will, of course, have to be approved as to legal form by City Counsel.
- b. Upon receipt of the agreement from the Edison Company, the agreement is submitted to City Attorney and the City Council for approval.
- c. An original, fully executed agreement must be returned to the Edison Company.

MISCELLANEOUS CASE MEETING AND LETTER AGREEMENT

Date: _____ Developer Name: _____

Project Streets: _____

City Area: _____

The Developer has met with Public Works Engineering Staff to discuss a miscellaneous project as described above. This project will be used for:

_____ Multiple Map development (Common facility)

_____ School Site (Name of School: _____)

_____ EDA Project

_____ Joint Jurisdiction (JPA, City, Indian Reservation, Caltrans)

_____ Voluntary Improvements

First submittal shall include (circle): street, sewer/water, landscape, streetlight, grading, signal, final map, and a copy of this signed letter.

This project may be accepted for plan checking if submitted within six months from the above date.

Engineering Staff

EMINENT DOMAIN PROCEDURE (CONDEMNATION)

The following Eminent Domain procedure shall only apply to a project which is conditioned to construct certain improvements where that condition is approved by the City Council and the implementation of the condition would require the developer of the project to acquire right-of-way and/or an easement from an adjacent property owner. In such cases, it is the responsibility and obligation of the developer to prepare the legal and plats of the required right-of-way and/or easements and to negotiate in good faith with the adjacent property owner in every reasonable way possible to obtain the needed right-of-way and/or easement.

All negotiations and attempts must be documented in writing. Should all efforts fail, then the developer can request in writing that the City initiate the eminent domain process. The developer must provide with his letter of request three complete packages of the documentations of his attempt as well as a copy of an appraisal of the property required to be acquired. The appraisal must be done by a qualified appraiser chosen from a list of appraisers obtained from the City (909-931-4235).

During the plan check process the developer/engineer must provide legal and plats for the required right-of-way and/or easement to the plan check engineer and the survey division.

Following the receipt from the developer of the letter requesting condemnation and the three complete packages of documentation, the plan check engineer will review all documents and verify prior to plan check approval that the requested condemnation is the only feasible solution.

The City Engineer shall provide to the City Attorney a copy of all condemnation request documentation, a written justification for the proposed condemnation, and a request that the Attorney review and provide direction on whether or not to proceed with the condemnation.

Once the Attorney gives us his/her direction to proceed, the City Engineer shall send a formal letter to City Attorney with a complete package requesting him to proceed with condemnation.

City Council may elect to involve an outside consultant to review the case and to attempt negotiations with the property owner. At the same time, City Attorney will send an agreement to the developer for his execution and a letter requiring the developer to deposit \$10,000 with City as payment for their processing of the request, and an additional deposit of 150% of the appraised value of the property to be condemned for use in acquiring the property.

Sometimes the issue would be settled at this stage and the property will be acquired. If not, then City Attorney will prepare and send a request to the City Council to allow proceeding with condemnation.

Upon City Council approval of City Attorney's request, the final map may be permitted to record if everything else that is needed for recordation is complete and done. There is no need to wait until the actual acquisition is completed to allow the map to record.

AT RISK LETTER EXAMPLE

(DEVELOPER LETTERHEAD)

Date _____

Principal Engineer
Public Works Department
City of Upland
460 N Euclid Avenue
Upland, CA 91786

RE: Request for At-Risk submittal prior to having (a complete package), (approved conditions) or other reason

Project No. _____ IP No. _____

Location _____

Dear Sir or Madam:

We are the developer(s) of the above project and we met with _____ from your section and discussed submitting improvement plans prior to having _____ (list deficiency). As allowed by the meeting we are submitting the improvement package except for _____.

We acknowledge that submitting the improvement plans at this time may cause additional plan checks and incur additional costs for plan checking due to the missing or incomplete data. We commit to continue the plan check process to final approval and signature as well as additional plan checks and costs should they occur.

We also understand that project approval will be withheld until deficiency is satisfied.

Sincerely,

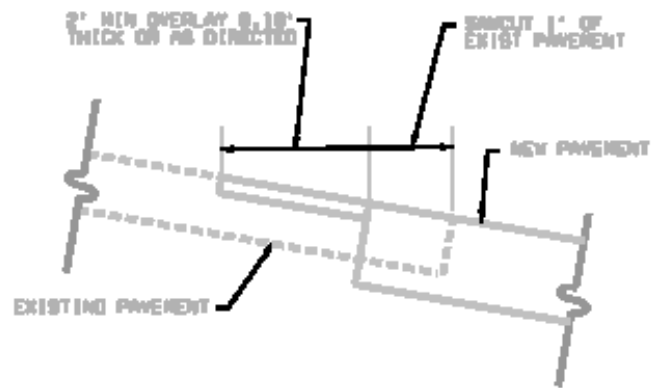
Owner/Developer's Name (Printed) Applicant

Signature

Date

cc: Developer
File
Notarization is required.

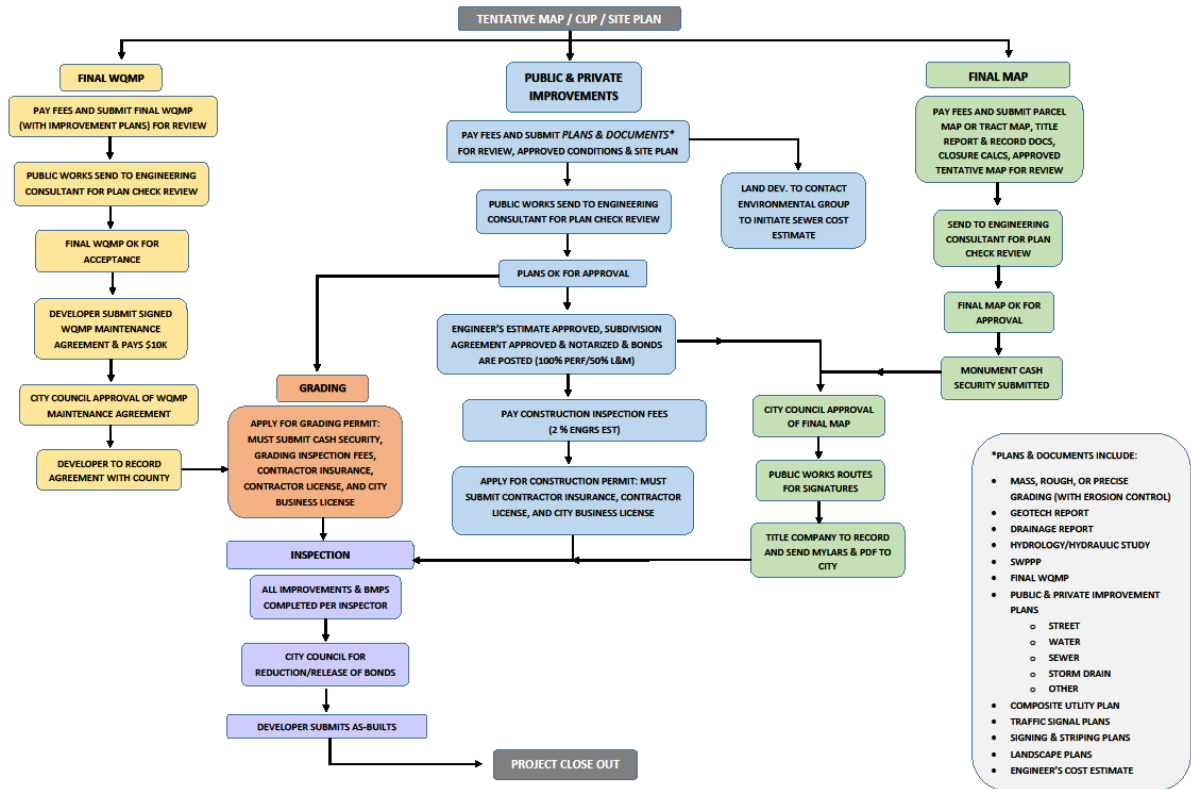
JOIN DETAIL



JOIN DETAIL
NTS

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DEVELOPMENT PLAN CHECK PROCEDURE FLOW CHART



CUSTOMER SERVICE QUESTIONNAIRE

Dear Customer,

Our goal is to provide the best service possible after your visit, e-mail or phone call, please take a few minutes to complete this questionnaire. Your comments will enable us to see how we are doing overall and improve any areas which may need improvement. When filled out, deposit in comment box by the front counter at City Hall, 460 Euclid Avenue, Upland, Ca 91786.

PLEASE TELL US HOW WE'RE DOING				
INSIDE THE OFFICE	EXCELLENT	VERY GOOD	GOOD	POOR
Staff courteous and helpful				
Staff quick and efficient				
Explanations and instructions clear				
TELEPHONE ANSWERING				
Timely response				
Receiving information or answers				
PLAN CHECK				
Checker courteous and helpful				
Pre-submittal meeting set and held in a timely manner				
Checker had frequent contact				
Checker able to answer questions and deal with issues				
OVERALL PERFORMANCE				
What would you say is our overall performance?				
Is there a staff person you would like to commend?	STAFF'S NAME:			
COMMENTS:				
NAME (Optional)	BUSINESS PHONE NUMBER ()		DATE	